SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1911.

No. 1090.

THE UNITED STATES, APPELLANT,

vs.

HARVEY STEEL COMPANY.

No. 1091.

MIDVALE STEEL COMPANY, APPELLANT,

vs.

HARVEY STEEL COMPANY.

APPEALS FROM THE COURT OF CLAIMS.

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8 Court of Claims.

HARVEY STEEL COMPANY v. THE UNITED STATES AND THE MIDVALE Steel Company, intervenor.	No. 29899.

I. PETITION AND AMENDED PETITION.

On the 3rd day of December, 1906, the claimant filed its original petition. Subsequently, to wit, on the 19th day of January, 1907, by leave of court, in lieu of said petition the claimant filed its amended petition, which is as follows:

1 In the Court of Claims of the United States.

HARVEY STEEL COMPANY v. THE UNITED STATES.	Amended petition.

To the Chief Justice and Judges of the Court of Claims:

I.

Your petitioner, Harvey Steel Company, respectfully presents its amended petition, and represents that it is, and at all times since the year 1887 has been, a corporation created, organized, and existing under the laws of the State of New Jersey.

II.

That on the 29th day of September, 1891, letters patent of the United States, bearing date on that day, and numbered 460262, were granted to the late Hayward A. Harvey, now deceased, formerly president of your petitioner, for a certain process of producing decrementally hardened armor plate, and for the decrementally hardened armor plates so produced, which process became widely known, as practiced under the direction of your petitioner, and of the said Hayward A. Harvey, as the Harvey process for the treatment of armor plates, or as the process of "Harveying" or "Harveyizing" or "Harvey treating" armor plates, and such armor plates as "Harveyed" or "Harveyized" armor-plates.

2 III.

That by a written agreement had, upon good and valuable consideration, under date of October 7, 1891, the said letters patent were assigned to and became vested in your petitioner, who then, and at all

times thereafter has continued to be, and now is, the owner of all patented rights in and to said process for armor plates and all rights otherwise acquired for practicing, using, or producing the same.

IV.

That in 1890 your petitioner exhibited to the Chief of the Bureau of Ordnance of the Navy Department of the United States an armor plate, and informed him that Mr. Hayward A. Harvey had discovered a process for hardening such plates which would produce plates of a combined hardness and toughness which had not yet been attained by manufacturers. To test this invention the Chief of Ordnance procured two plates from well-known manufacturers—the Linden Steel Company—hardened by known existing methods. One of these was given to your petitioner to harden by the Harvey process. The other was retained by the Ordnance Bureau. Both were subjected ultimately to the same test. The Chief of Ordnance officially reported this test to the Secretary of the Navy as follows:

"One plate, about 2½ feet square and 6 inches thick, was carbonized, in a gradually decreasing amount, to a depth of 3 inches, and subjected to a comparative ballistic test by the attack of a 6-pounder Hotchkiss projectile with a similar plate untreated. The resulting penetration in the untreated plate was about 3 inches. In the carbonized plate it was nil, the projectile being completely shattered.

"In view of these results, which were reproduced and corroborated by further experiments, the bureau has ordered an untreated armor plate 8 feet by 6 feet by 10½ inches, and proposes to have erected at the Washington Navy Yard the necessary plant for treatment
3 by the Harvey process. It will then be subjected to a ballistic attack with the 6-inch gun, and a comparative study made with the effects upon the foreign plates recently tested at Annapolis.

"The object of the experiments, as will be apparent, is the development of an armor plate which shall possess a superficial hardness and the toughness inherent in all steel, or one of its alloys."

V.

That in February, 1891, the said Chief of Ordnance of the Navy Department of the United States, to further test the Harvey process, procured two armor plates from a foreign manufacturer—Schneider & Co.—known as Creusot plates. One of these in like manner was retained by the Ordnance Bureau, and one your petitioner hardened; both were subjected to the same test. The Chief of Ordnance officially reported the results of this test to the Secretary of the Navy as follows:

"In February last took place the test of the Creusot 10½-inch steel plate, which had been treated by the Harvey process at the Washington Navy Yard. The plate was attacked by seven 6-inch armor-piercing shells, three Holzer and four Carpenter, fired from a 6-inch

gun of 35 calibre, the striking velocity being 2,095 foot-seconds. The greatest penetration was 4 inches, except in one round, that at the center of the plate, where the point of the shell reached the backing. All the projectiles were broken up. The plate was cracked, but until the last round none were detached from the backing; at this round about one-eighth of the plate fell to the ground. These results are remarkable and indicated to the department a probability that in this treatment has been found the means of producing the ideal armor plate—a hard front combined with a tough back, without any weld or other line of demarcation between the two."

VI.

That following these tests, on the 3rd day of March, 1891, at the request of the Government of the United States, represented by the Secretary of the Navy, an option was given by your petitioner
4 to the said Government for the purpose of the application of the Harvey process for treatment of armor plates, which option is recited and set forth in the contract of March 21st, 1892, set forth in the following paragraph:

VII.

That on the 3rd day of March, 1891, the said Government of the United States, represented by the Secretary of the Navy, accepted the offer of your petitioner, and agreed to comply with the terms thereof; and on the 21st day of March, 1892, the following contract was entered into by and between your petitioner and the said Government of the United States, represented by the Secretary of the Navy:

"Memorandum of an agreement of two parts, made and entered into this twenty-first day of March, A. D. 1892, by and between the Harvey Steel Company, a corporation created under the laws of the State of New Jersey, and doing business in said State, represented by the president of said corporation, of the one part (hereinafter called the party of the first part), and the United States, represented by the Secretary of the Navy, of the other part (hereinafter called the party of the second part).

"Whereas the party of the first part is the owner of all and singular the patented rights in and to a certain process, known as the 'Harvey process,' for the treatment of armor plate for use in the construction of vessels; and

"Whereas the parties have agreed and do hereby agree, that, upon the terms hereinafter stated, armor plate manufactured or treated under the said 'Havey process' shall, so far as possible, be supplied to such of the following-described naval vessels as the department may from time to time designate, to wit:

"Cruiser No. 6, 'Amphitrite.'

"Cruiser No. 7, 'Monadnock.'

"Cruiser No. 8, 'Terror.'
"Cruiser No. 9, 'Texas.'
"Cruiser No. 10, 'Maine.'
"Cruiser No. 11, 'Monterey.'
"Cruiser No. 12, 'New York.'
"Cruiser No. 13, 'Indiana.'
"Gunboat No. 5, 'Massachusetts.'
"Gunboat No. 6, 'Oregon.'
"'Puritan,' ram.

"Whereas the said Harvey Steel Company, under date of March 3, 1891, in a communication signed by B. G. Clark, president; H. A. Harvey, general manager; and Theodore Sturges, treasurer, agreed to give the Navy Department the option of purchasing the right to use and employ the 'Harvey process' for treating armor plates, as follows:

"We hereby agree to give to the Naval Department an option for the purchase of the application of the Harvey process for treating armor plates, which was tested at the Naval Ordnance Proving Ground, Annapolis, Md., February 14, 1891, on the following terms, viz:

"In the event of the process proving of value, after further tests, and upon the demand of the Naval Department for its application to armor plating, the sum of $75,000 is to be paid by the latter to the Harvey Steel Company as royalty therefor, and as utilized, at the rate of one-half (½) of one (1) cent per pound of the weight of the finished plate. This royalty of one-half (½) of one (1) cent per pound is to cease when the said sum of $75,000 has been paid.

"The Navy Department is to have the right to use the process, should it so desire, without further compensation, upon all armor plating which is to be applied to vessels, the construction of which is authorized by Congress at this date. In the event of the authorization by Congress of the construction of other vessels of war than those above mentioned, a new contract, for the further application of the Harvey process of treating armor plates, is to be made between the Naval Department and the latter should the department so desire.

"It is understood that the Naval Department will undertake to bear all the expense of the experimental development of the process as applied to armor plates, our Mr. Harvey to furnish, in consultation with the Bureau of Ordnance, all details at present in his possession in regard to the process, or which he may personally develop, in the perfection of his methods of treatment as applied to armor plating.

"Whereas the Navy Department, under date of March 3, 1891, in a communication signed by Wm. M. Folger, Chief of the Bureau of Ordnance, accepted the terms of the offer of the Harvey Steel Company, as stated in the communication above mentioned, and by this agreement does accept the option offered by the party of the first part in the first paragraph of said communication; and

6 "Whereas the party of the second part has agreed and does hereby agree to also pay, as hereinafter set forth, the expense of applying said process in the manufacture or treatment of said armor plate:

"Now, therefore, it is mutually understood, covenanted, and agreed by and between the parties hereto that the party of the second part, upon the terms herein stated, may use and employ, in the treatment of armor plate manufactured or to be manufactured for naval vessels, as hereinbefore stated, the hereinbefore mentioned process known as the 'Harvey process.'

"The party of the first part, in consideration of the premises, and provided the said process of treating said armor plate shall be conducted at the Bethlehem Iron Works, at South Bethlehem, Pennsylvania, or elsewhere, under the direction of the party of the first part, hereby guarantees that, in addition to the hereinbefore mentioned royalty of one-half of one cent per pound, to be paid by the party of the second part to the party of the first part, upon armor for vessels which have been authorized by Congress up to March 3, 1891, the additional cost to the party of the second part of applying the Harvey process, hereinbefore referred to, to armor plate, as aforesaid, shall, during the period of one year from the date hereof, be nine-tenths of one cent ($0.009) per pound of the finished plate, and that after the expiration of the period of one year from the date hereof the said additional cost to the party of the second part shall not exceed nine-tenths of one cent per pound of the finished plate; and in case it shall be found that the actual cost of the application of said process to the armor plate shall have been diminished during one year from the date hereof, then the said additional cost to the party of the second part shall thereafter be equal to the said actual cost of the application of such treatment to the armor plate plus one-half (½) the difference between said actual cost of application and the sum of nine-tenths of one cent ($0.009) per pound of the finished plate.

"The party of the first part hereby further covenants and agrees that it will hold and save harmless, and, at its own expense, defend the United States from and against all and every demand or demands for or on account of the use and employment of the 'Harvey process,' above mentioned, in the manufacture or treatment of armor; and from all and every demand or demands which shall here-
7 after be made for the payment of any sum or sums of money in excess of the aforesaid cost for royalty and treatment of armor under said process, to be paid as hereinbefore specified and provided for in this contract.

"Finally, it is hereby mutually understood, covenanted, and agreed by and between the parties hereto that the party of the second part shall render to the party of the first part quarterly reports of all armor plate manufactured or treated under the said Harvey process which the party of the second part shall have received during the

three months next preceding the dates of such reports, respectively, and within a period of thirty days after the rendition of each of said quarterly reports the party of the second part shall pay to the party of the first part such sum of money as may be required to cover the said royalty of one-half of one cent per pound, and also the cost of treatment by said Harvey process of the armor plate which shall have been received by the party of the second part during the three months next preceding the commencement of said period of thirty days; it being hereby understood and agreed that the first of the said quarterly reports shall be rendered on or before the first day of May, 1892, and shall be thereafter rendered every three months until all the armor treated for vessels authorized by Congress to March 3, 1891, shall have been received by the party of the second part.

"In witness whereof the respective parties hereto have hereunto set their hands and seals the day and year first above written.

"THE HARVEY STEEL COMPANY,
"By G. B. CLARK, *Pres.*
"THE UNITED STATES,
(SEAL.) "By B. F. TRACY,
"*As Secretary of the Navy.*

"Signed and sealed in the presence of—

"Attest:
(SEAL.) "L. L. STURGIS, *Secty. pro tem.*
"WM. B. REMEY, *Judge Advocate General*
"(as to B. F. Tracy, Secretary of the Navy)."

8 VIII.

That thereafter additional trial armor plates were subjected to numerous experimental tests by your petitioner and by the officers and agents of the United States, and on the 8th day of October, 1892, your petitioner was notified that the said process was definitely and formally adopted by the Navy Department by the following letter:

"DEPARTMENT OF THE NAVY, BUREAU OF ORDNANCE,
"*Washington, D. C., October 8, 1892.*

"THE HARVEY STEEL CO.,
"*Newark, N. J.*

"SIRS: Your letter of the 29th ultimo, addressed to the honorable Secretary of the Navy, has been referred to this bureau, which has cognizance of the matter.

"You are informed that the process for armor plate has been definitely adopted by the Navy Department.

"Respectfully,
"WM. M. FOLGER, *Chief of Bureau.*"

IX.

That acting under the requirement of said contract of March 21, 1892, by which your petitioner agreed that its Mr. Hayward A. Harvey should furnish the United States all details then in his possession in regard to the process, or that he might develop in the perfection of his method of treatment, the said United States, on February 18, 1893, and on March 14, 1893, required your petitioner and the said Hayward A. Harvey to furnish and reveal to the Navy Department its secret process and improvements, and thereupon your petitioner did so furnish and reveal the same.

9

X.

That on the 30th day of March, 1893, certain contract questions being then under discussion between the Navy Department of the United States and your petitioner, the United States, by its Secretary of the Navy, proposed a settlement between the United States and your petitioner, which proposal was in the following words:

"BUREAU OF ORDNANCE, NAVY DEPARTMENT,
"*Washington City, March 30, 1893.*

"THE HARVEY STEEL COMPANY,
Newark, N. J.

"SIRS: I am directed by the Secretary of the Navy to propose the following settlement of the contract question at present under discussion between the Navy Department and the Harvey Steel Company, viz:

"The contract of March 31st, 1892, between the Navy Department and the Harvey Steel Company to be annulled, the price to be paid for the cost of the treatment of armor plates by the Harvey process having been arranged for by contracts with the Bethlehem Iron Company and the Carnegie Steel Company.

"A new contract to be made between the Secretary of the Navy and the Harvey Steel Company, by which the department agrees:

"1. To pay at once the sum of $96,036.46, this sum being the total royalty at the rate of ½ c. per pound upon 8,576.47 tons of armor, the amount of armor which [redacted] artment proposes to Harveyize intended for vessels, the [redacted] uction of which was authorized by Congress prior to March 21st, 1892, and for which the contract of that date was made.

"Also for the armor of the 'Iowa' and 'Brooklyn' authorized since that date, and for which no contract exists.

"2. To pay a royalty of ½ c. per pound on all future contracts for armor to be treated by the Harvey process.

"3. The Harvey Steel Company to furnish all information regarding the composition of the compound employed in the Harvey process, and all information regarding its application in possession of the

company. Also any improvements which the Harvey Steel Company may make at any future time.

Respectfully,

W. T. SAMPSON,
"Chief of Bu. Ordnance."

10 XI.

That on the 12th day of April, 1893, the United States, represented by the Secretary of the Navy, entered upon a new contract with your petitioner, in and by which it agreed to pay to your petitioner the sum of $96,056.46 (it being understood, however, that 10 per cent of the said sum should be withheld by the United States until, upon the receipt of the formulæ for the compounds used and employed in the application of the Harvey process, said process should be used and found efficient, and in the judgment of the Secretary of the Navy of satisfactory value), and should have the right to employ the said process on all vessels of war, which might, after July 19, 1892, be authorized by Congress upon the payment of royalty of one-half of 1 cent per pound for the finished plate; and said United States, on or about the 12th day of April, 1893, paid to your petitioner the said sum of $96,056.46, less the 10 per cent reserved therefrom. This contract was in the terms following:

"Memorandum of agreement, of two parts, made and entered into this 12th day of April, A. D. 1893, by and between the Harvey Steel Company, a corporation created under the laws of the State of New Jersey, and doing business in said State, represented by the president of said corporation, of the one part (hereinafter called the party of the first part), and the United States, represented by the Secretary of the Navy, of the other part (hereinafter called the party of the second part).

"Whereas the party of the first part is the owner of all and singular the patented rights in and to a certain process, known as the Harvey process, for the treatment of armor plates for use in the construction of vessels, and of the exclusive right to the use and employment of armor plates manufactured according to said process, as particularly set forth in letters patent of the United States, No. 460262, issued September 29, 1891, to Hayward A. Harvey, of Orange, New Jersey, for certain improvements in decrementally hardened armor plates and in the art of manufacturing the same; and

11 "Whereas an agreement was made and entered into, under date of March 21, 1892, by and between the aforesaid parties hereto, whereby the party of the first part granted to the party of the second part the right to use and employ the Harvey process aforesaid in the manufacture of armor plates for certain vessels of the Navy therein named for the sum of $75,000, to be paid by the party of the second part to the party of the first part as royalty therefor, and as utilized, at the rate of one-half of one cent per pound of the finished plate, the party of the first part guaranteeing that the cost to the party of the second part, of the application of said process to

armor plates, shall not exceed nine-tenths of one cent per pound of the finished plate, provided the application of such process should be made under the direction of the party of the first part; and

"Whereas the party of the second part has entered into an agreement with the Bethlehem Iron Company, of South Bethlehem, Pennsylvania, for the treatment, according to said Harvey process, of armor plates for certain of the vessels mentioned in the aforesaid agreement, at a price in excess of the limit guaranteed by the party of the first part hereto, as aforesaid, the application of such process not to be made under the direction of said party of the first part.

"Now, therefore, the aforesaid agreement of March 21, 1892, is hereby cancelled and annulled, and it is hereby mutually understood, covenanted, and agreed by and between the parties hereto, that for and in consideration of the premises and in consideration of the sum of ninety-six thousand and fifty-six dollars and forty-six cents ($96,056.46) to be paid by the party of the second part to the party of the first part as royalty, the party of the second part may, upon the terms hereinafter stated, use and employ in the treatment of armor plates manufactured or to be manufactured for all naval vessels, the construction of which was authorized by Congress up to and including July 19, 1892, the aforesaid Harvey process, and may use and employ the armor plates for said vessels manufactured according to said process, it being understood, however, that ten per cent of said sum shall be withheld by the party of the second part until, upon the receipt of the formulæ for the compounds used and employed in the application of the Harvey process, said process shall have been tried and found to be efficient, and, in the judgment of the Secretary of the Navy, of satisfactory value.

"The party of the first part hereby further covenants and agrees that it will hold and save harmless, and at its own risk and expense defend the United States, from and against all and every demand or demands for the payment of any sum or sums of money in excess of the aforesaid sum of $96,056.46 as royalty for or on account of the use and employment of said process in the treatment of armor plates under this agreement, or of the armor plates manufactured in accordance therewith, and from and against all and every demand or demands for or on account of any infringement or alleged infringement of patented rights appertaining to said process or plates.

"It is hereby mutually understood, covenanted, and agreed by and between the parties hereto that the party of the second part shall have the right to use and employ the aforesaid Harvey process in the treatment of armor plates for vessels which have been since July 18, 1892, or which may hereafter be authorized by Congress, and to use and employ armor plates for such vessels manufactured according to said process, paying therefor to the party of the first part a royalty of one-half of one cent per pound of the finished plate.

"It is hereby further mutually understood, covenanted, and agreed by and between the parties hereto that the party of the first part shall

furnish full and complete information regarding the composition of the compounds employed in the Harvey process, and the application of the same, and shall impart to the party of the second part all information concerning any and all improvements which said party of the first part may, at any time in the future, make in or upon said process as covered by the aforesaid letters patent, and that the party of the second part shall have the right to adopt and use and employ any or all of such improvements in said process, and to use the armor plates manufactured in accordance therewith under the terms of this agreement, without the payment of any compensation or royalty therefor to the party of the first part, in addition to that to be paid as hereinbefore stipulated.

"It is hereby further mutually understood, covenanted, and agreed by and between the parties hereto, that this agreement shall not, nor shall any interest herein, be transferred by the party of the first part to any other person or persons, and that no Member of or Delegate to Congress, officer of the Navy, nor any person holding any office or appointment under the Navy Department, shall be admitted
13 to any share or part of this agreement or to any benefit to arise therefrom; but this stipulation, so far as it relates to Members of or Delegates to Congress, shall not be considered to extend to this agreement, it being made with an incorporated company.

"It is hereby further mutually understood, covenanted, and agreed by and between the parties hereto, that if, at any time, the party of the first part shall fail to comply with and fulfill the terms, conditions, and requirements of this agreement on its part, the party of the second part may demand and recover from the party of the first part, on account of such failure, and as liquidated damages, a sum of money equal to the penalty of the bond accompanying this agreement, and that in case it should at any time be judicially decided that the party of the first part is not legally entitled, under the letters patent aforesaid, to own and control the exclusive right to the use and employment of said process and the decrementally hardened armor plates produced thereunder, as set forth in the letters patent aforesaid, then the payment or royalty under the terms of this agreement shall cease, and all sums of money due the party of the first part from the party of the second part, as royalty for the use and employment of said process, and armor plates, as aforesaid, shall become the property of the party of the second part.

"The party of the second part, in consideration of the premises, hereby covenants and agrees that all warrants for payments to be made in accordance with the terms of this agreement shall be made payable to the party of the first part or its order.

"In witness whereof, the respective parties hereto have hereunto set their hands and seals the day and year first above written.

"HARVEY STEEL CO'Y,

"By H. A. HARVEY, *President*. (SEAL.)

"Attest:

"WM. ALLEN SMITH, *Sec'y*.

"Signed, sealed, and delivered in the presence of—

"THE UNITED STATES,
"By HILARY A. HERBERT,
"*As Secretary of the Navy.*

"SAM. C. LEMLY, *Judge Advocate General,*
"As to Hilary A. Herbert, Secretary of the Navy. (SEAL.)"

XII.

That afterwards, and on or about December 7, 1893, the officers of the United States being satisfied that your petitioner had complied with the said contract of April 12, 1893, and demonstrated the value and efficiency of the process, the 10 per cent. withheld by the United States under said contract of April 12, 1893, was paid over to your petitioner.

XIII.

That thereafter, the Congress of the United States, by an act approved on or about March 2, 1895, authorized the construction of two battleships for the United States Navy, which were known respectively as No. 5 and No. 6, and subsequently named the "Kearsarge" and "Kentucky," and on or about the 15th day of April, 1896, the United States, by the Secretary of the Navy, issued and had advertised on that day inviting proposals for the supply of nickel-steel armor plates for the said two battleships, to the amount of about 6,000 tons, the said advertisements requiring of the bidders that the said armor plates should be "treated by a process of supercarburization known as the Harvey process," and the said advertisement further stating to the bidders as follows:

"Bids are hereby invited for supplying the following named material: About 6,000 tons, more or less, of nickel-steel armor, to be of the best material and domestic manufacture, part of which, as shown by the specifications, will be required to be treated by a process of supercarburization known as the Harvey process.

"The prices bid for armor treated by the Harvey process must not include anything for royalties, as the department has acquired the right to use said process and will indemnify the contractors against all claims therefor."

XIV.

That the Bethlehem Iron Company and the Carnegie Steel Company, Limited, having made bids in accordance with said specifications and advertisements, the United States, on or about the first day of June, 1896, by its Secretary of the Navy, entered into two separate contracts with said companies, respectively, in which they agreed to furnish in certain proportions the armor described in said advertisements and circulars including the "Harveyed" armor; and in com-

pliance therewith, proceeded to manufacture and treat the armor plates, and supplied and delivered the same in due course to the United States. These plates were manufactured under the inspection and supervision of officers and agents of the Ordnance Bureau of the Navy Department of the United States, and were accepted and paid for by the bureau as having been treated by the Harvey process.

XV.

That the weight of finished plates of said armor so treated and supplied to the United States by the said Bethlehem Iron Company and the said Carnegie Steel Company, Limited, for the said battle ships Kearsarge and Kentucky, at the rate of royalty of one-half (½) of one (1) cent per pound for the finished plate amounted to a large sum, to wit, the sum of sixty thousand eight hundred and six dollars and forty-five cents ($60,806.45); and that the said sum became wholly due and remained unpaid.

XVI.

That your petitioner repeatedly applied to the Secretary of the Navy of the United States for an accounting of the royalties for said "Harveyed" armor so treated and supplied under said contracts, and for payment thereon, as provided for by said contract
16 dated April 12, 1893, but the said Secretary of the Navy wholly refused to pay said sum or any part thereof, although repeatedly requested so to do.

XVII.

That thereafter and on or about June 22, 1898, the Secretary of the Navy of the United States transmitted to this court, in accordance with the provisions of sec. 1063 of the Revised Statutes of the United States, certain papers relating to the said claim of your petitioner, in order that the said claim might receive trial and adjudication by the court, as provided for by the said statute. Proceedings were thereupon had before this court in suit No. 21110, on the claim of your petitioner above set forth, in accordance with sec. 1064 of the Revised Statutes of the United States, and with the laws of the United States and the rules and regulations of this court in such case made and provided, and said case having been heard by this court, this court, upon the evidence, made certain findings of fact, and upon these findings of fact, the court decided as a matter of law that your petitioner was entitled to receive the amount of royalty set forth in said claim and petition, to wit, the sum of sixty thousand eight hundred and six dollars and forty-five cents ($60,806.45).

XVIII.

That after said decision, and on or about October 24, 1903, the United States, by L. A. Pradt, its Assistant Attorney General, brought before this court a motion for a new trial, alleging certain

errors of law and fact in said decision, and on February 24, 1904, the court overruled the said motion for a new trial and amended its findings of fact.

XIX.

That a final decree was thereupon made and entered in this court in favor of the petitioner and against the United States for the said sum of $60,806.45 for royalty for the use of said Harvey process and manufacture of armor plates.

XX.

That the United States took an appeal from said decree and judgment in favor of your petitioner to the Supreme Court of the United States, and the said appeal having been heard by the said Supreme Court on a transcript of the pleadings, proceedings, the findings of facts and conclusions of law, the opinions of this court and its said decree and judgment, the said Supreme Court, on or about January 16, 1905, affirmed in all respects the said decree and judgment of this court, which judgment was subsequently paid to your petitioner by the United States; that by the proceedings above set forth, between the Government of the United States and your petitioner, and by the said final decree and judgment, the said United States, its agents and officers are now estopped to deny or contest before this court, as against your petitioner, any of the questions therein litigated and determined.

XXI.

That by contracts made and entered into on June 8, 1898, and August 30, 1899, respectively, by and between the United States and the Carnegie Steel Company, Limited, a limited partnership, of the State of Pennsylvania, and by contracts made and entered into on November 26, 1900, February 28, 1903, and January 9, 1904, respectively, by and between the United States and the Carnegie Steel Company, a Pennsylvania corporation, and by a contract made and entered into on the 9th day of June, 1898, by and between the United States and the Bethlehem Iron Company, a Pennsylvania corporation, and by contracts made and entered into on October 4, 1899, November 28, 1900, February 28, 1903, and December 31, 1903, respectively, by and between the United States and the Bethlehem Steel Company, a Pennsylvania corporation, said companies respectively agreed to and did manufacture and deliver to the United States certain face-hardened armor plates, which said plates were made and treated by the said companies, respectively, by the said Harvey process.

XXII.

That the weight of the finished armor plates so made and treated by the said Bethlehem Iron Company, Bethlehem Steel Company, Carnegie Steel Company, Limited, and the Carnegie Steel Company,

said furnished by them to and accepted by the United States from June 3, 1896, to September 30, 1905, under said several contracts referred to in the last preceding paragraph, amounted to 58,047,515,867 tons, equivalent to 130,020,435 pounds, and that the royalties, at the rate of one-half of 1 cent per pound, or $11.20 per ton for the said finished plate, which was due your petitioner under the said contract of April 12, 1893, with the United States, amounted to the sum of six hundred and fifty thousand one hundred and thirty-two dollars and seventeen cents ($650,132.17); and that said sum became wholly due and remained unpaid.

XXIII.

That your petitioner applied to the Secretary of the Navy of the United States for an accounting of the royalties for the said "Harveyed" armor, so treated, supplied and accepted under the said contracts referred to in Paragraphs XXI and XXII hereof, and for the payment thereof, as provided by the said contract dated April 12, 1893, but the said Secretary of the Navy refused to pay said sum or any part thereof.

XXIV.

That your petitioner commenced a suit in this court, No.
19 25267, in accordance with the provisions of the Revised Statutes of the United States and the rules and regulations of this court, against the United States, by filing a petition herein on or about May 28, 1904, and an amendment thereto on or about November 9, 1905, to recover from the United States, under your petitioner's said contract of April 12, 1893, the aforesaid royalties, amounting to the said sum of six hundred and fifty thousand one hundred and thirty-two dollars and seventeen cents ($650,132.17), due to your petitioner under the said contract on the said finished armor supplied to the United States and accepted by it, as alleged in Paragraphs XXI and XXII hereof. That after some proceedings were had in said suit the issues raised therein were presented to the Secretary of the Navy, who, upon consideration thereof, announced that the judgment of this court in the aforesaid suit No. 21110 of your petitioner against the United States, as affirmed by the Supreme Court of the United States, was, in his opinion, controlling upon the United States as to all the issues raised therein; that the issues raised in the said suit No. 25267 were substantially the same as those raised in the said suit No. 21110, and that as they had been judicially determined in favor of your petitioner, and against the United States, under the said contract of April 12, 1893, the royalties, amounting to the sum of six hundred and fifty thousand one hundred and thirty-two dollars and seventeen cents ($650,132.17), due to your petitioner as aforesaid, should be paid. That thereafter certain proceedings were duly had in the said suit, and the case having been heard by this court the

court, on or about November 16, 1905, upon the evidence, made certain findings of fact, and upon these findings of fact this court decided, as a matter of law, that your petitioner was entitled to recover judgment for the amount of said royalties set forth in said petition and amendment thereto, to wit: the said sum of six hundred and fifty thousand one hundred and thirty-two dollars and seventeen cents ($650,132.17). That on the same day a final judgment was entered in this court in favor of your petitioner and against the United States for the said sum of six hundred and fifty thousand one hundred and thirty-two dollars and seventeen cents ($650,132.17), which was subsequently paid to your petitioner by the United States, and that by the proceedings in said last-mentioned suit, No. 25267, and by the said final judgment, the said United States and its agents and officers are now estopped to deny or contest before this court, as against your petitioner, any of the questions therein litigated and determined.

XXV.

That the proceedings and judgments of this court in the said suits numbered 21,110 and 25,267 will more fully and at large appear by reference to the records of this court, and which proceedings and judgments your petitioner prays may be deemed and taken as part of this petition.

XXVI.

That the due and unpaid claims hereinafter set forth of your petitioner against the United States are founded upon the said contract dated April 12, 1893, between your petitioner and the United States, and present substantially the same questions which have been judicially determined by this court and the United States Supreme Court in the aforesaid suits of your petitioner against the United States.

XXVII.

That on December 15, 1903, the Government of the United States, acting by its Secretary of the Navy, and The Midvale Steel Company, a corporation organized and existing under the laws of the State of Pennsylvania, made and entered into a contract by which the said The Midvale Steel Company agreed to manufacture and deliver to the Navy Department of the United States certain armor plates according to the conditions stated in an advertisement and circular of the Secretary of the Navy dated August 3, 1903, proposals of The Midvale Steel Company under said advertisement, and a printed circular and specifications concerning armor plate and appurtenances for vessels of the United States Navy, approved by the Secretary of the Navy November 30, 1903.

XXVIII.

That under said contract The Midvale Steel Company used and employed the Harvey process aforesaid in the treatment of armor plates, and have, up to December 7, 1906, manufactured and delivered to the Navy Department of the United States face-hardened armor plates in accordance with the aforesaid Harvey process, and which have been accepted by the said Navy Department (and which were in fact made and treated in substantially the same manner as those heretofore recited as made for the said Navy Department, and upon which this court finally adjudicated and decreed that the petitioner was entitled to recover royalty from the defendant) to at least the amount of four thousand five hundred and fifty and fourteen hundredths (4,550.14) tons, or ten million one hundred and ninety-two thousand three hundred and thirteen (10,192,313) pounds, for which royalties are due your petitioner under its contract of April 12, 1893, with the United States aforesaid to the sum of more than fifty thousand nine hundred and sixty-one dollars and fifty-six cents ($50,961.56); that under said contract of December 15, 1903, the said Midvale Company, since December 7, 1906, has continued to manufacture for and deliver to, or intends to manufacture for and deliver to the said United States, and the said United States, since December 7, 1906, has continued to accept or intends to accept, face-hardened armour plates manufactured and treated by the
22 Harvey process as aforesaid to the extent of at least two million eight hundred and thirty-one thousand and forty-seven pounds (2,831,047); but your petitioner cannot state, and cannot ascertain the precise number of pounds of said armor plate actually manufactured and delivered by the said Midvale Company, or accepted by the United States since December 7, 1906, and consequently cannot state and cannot ascertain the precise amount of royalty due your petitioner, without an examination of the records or papers of the said Navy Department which will disclose the number of pounds of said armor plate manufactured and delivered by The Midvale Steel Company and accepted by the United States under the said contract of December 15, 1903, since December 7, 1906. Your petitioner therefore prays that this court grant an order calling upon the Navy Department for such information, records or papers as may be deemed necessary to disclose the number of pounds of said armor plate made, delivered, and accepted since December 7, 1906, and that when such information is furnished, your petitioner may have leave to file an amendment to this amended petition, or an amended petition to take the place of this amended petition.

XXIX.

That by the said contract made and entered into on December 15, 1903, by and between the said The Midvale Steel Company and the United States, the United States authorized the said company to use and employ the said Harvey process or a process satisfactory to

and approved by the Navy Department of the United States, in the treatment of the armor plates manufactured under said contract, and that the said company did in fact use and employ the said Harvey process in the treatment of such armor plates so manufactured and delivered to, and accepted by, the United States, in execution of said contract, and that said process by which the said company so manufactured and treated the said armor plate for, and delivered to, and accepted by the United States aforesaid, and in accordance
23 with said contract, and the said armor plates were satisfactory to and approved by the said Navy Department; that the weight of said finished armor plates so treated and supplied to the United States by the said The Midvale Steel Company since the 15th day of December, 1903, and up to December 7, 1906, has amounted to more than four thousand five hundred and fifty and fourteen hundredths (4,550.14) tons, or ten million one hundred and ninety-two thousand three hundred and thirteen (10,192,313) pounds, and that royalties at the rate of one-half of one cent per pound for the said finished plates due your petitioner under its said contract of April 12, 1893, with the United States aforesaid have amounted to more than fifty thousand nine hundred and sixty-one dollars and fifty-six cents ($50,961.56), and more than the sum of fifty thousand nine hundred and sixty-one dollars and fifty-six cents ($50,961.56) is now wholly due to your petitioner and is unpaid.

XXX.

Your petitioner has applied to the Secretary of the Navy of the United States for an accounting of the royalties for said armor plates furnished under said contract since December 15, 1903, and for the payment thereof, as provided by its contract with the United States aforesaid, dated April 12, 1893, but the said Secretary of the Navy has neglected and refused, and still refuses to pay the same or any part thereof.

XXXI.

It has never at any time been judicially decided that your petitioner is not legally entitled, under the Letters Patent No. 460262 aforesaid, to own and control the exclusive right to the use and employment of the process aforesaid, and the decrementally-hardened armor plates produced thereunder.

XXXII.

There is now due and owing from the said United States to your petitioner, under said agreement of April 12, 1893, as royalties for armor plates manufactured and supplied to the United States by the said The Midvale Steel Company, up to December 7, 1906, the sum of more than fifty thousand nine hundred and sixty-one dollars and fifty-six cents ($50,961.56), no part of which has been paid.

XXXIII.

That the said Government of the United States still continues to make and enter into new contracts, not set forth herein, with the said The Midvale Steel Company for the manufacture and delivery of armor plates, and specifically did enter into such contracts on April 5, 1905, and August 6, 1906, respectively, and that the said company under such new contracts has used and employed or proposes to use and employ the said Harvey process in the treatment of armor plates, and has delivered or intends and proposes to deliver armor plates so treated to the United States, and which process and armor plates have been approved and accepted by the United States, or it intends to approve and accept the same, and on which there is due or will be due from the United States to your petitioner under said contract of April 12, 1893, large amounts of royalties; but your petitioner cannot state its case or claim, so far as it is based on the said new contracts mentioned in this paragraph of this petition, with requisite particularity, until it is informed by the Navy Department of the exact number of pounds of armor plate so delivered to and accepted by it and the United States under said new contracts. Your petitioner therefore prays that this court grant an order calling upon the said Navy Department for such information, records, or papers and new contracts as may be deemed necessary to disclose to
25 your petitioner the dates and the character of said new contracts and the number of pounds of said armor plates made and delivered by The Midvale Steel Company to, and accepted by the United States thereunder, and that when such information is furnished, your petitioner may have leave to file an amendment to this petition or an amended petition to take the place of this amended petition.

Your petitioner therefore prays the court that judgment may be rendered in its favor of the sum of fifty thousand nine hundred and sixty-one dollars and fifty-six cents ($50,961.56) and so much additional thereto as the royalties may in fact amount to at the commencement of this action or at the time of entry of the final decree herein.

HARVEY STEEL COMPANY,
By S. S. PALMER, *President.*

Attest:
[Corporate seal.] GEO. WM. BURLEIGH, *Secretary.*

BETTS, SCHEFFIELD, BENTLEY & BETTS,
Attorneys for Petitioner.
JAMES R. SHEFFIELD,
Of Counsel.

26 UNITED STATES OF AMERICA,
Southern District of New York,
State and County of New York, ss:

Personally appeared before me, James J. Cosgrove, notary public, duly commissioned and appointed, S. S. Palmer, who, being duly sworn, deposes and says that he is the president of the petitioner named in the foregoing petition and that his genuine signature is thereunto subscribed; that no assignment or transfer of the claim therein mentioned, or any part thereof, or any interest therein, has been made, and that said claimant is justly entitled to more than the amount therein claimed from the United States after allowing all just credits and offsets, and that the deponent verily believes the facts as stated in said petition to be true.

S. S. PALMER.

Subscribed and sworn to before me in the county, State, and district aforesaid, this — day of January, 1907.

[Notarial seal.] JAMES J. COSGROVE,
Notary Public, New York County, New York.

Petitioner's address: Jersey City, New Jersey.
Attorney's address: Betts, Sheffield, Bentley & Betts, 120 Broadway, New York City.

27 II. INTERVENING PETITION OF THE MIDVALE STEEL COMPANY.

Filed April 19, 1909, by leave of court.

In the Court of Claims of the United States.

HARVEY STEEL COMPANY
v.
THE UNITED STATES. } No. 29899.

Intervening petition of the Midvale Steel Company.

To the honorable the Chief Justice and Associate Justices of the Court of Claims:

And now comes the Midvale Steel Company, a corporation of the State of Pennsylvania, having its principal place of business and works at Nicetown, in the city of Philadelphia, and State of Pennsylvania, and represents to this honorable court as follows:

(1) That the claimant, the Harvey Steel Company, in the above entitled suit, in its amended petition, alleges, inter alia,

XXVII.

That on December 15, 1903, the Government of the United States, acting by its Secretary of the Navy, and the Midvale Steel Company, a corporation organized and existing under the laws of the

State of Pennsylvania, made and entered into a contract by which the said the Midvale Steel Company agreed to manufacture and deliver to the Navy Department of the United States certain armor plates according to the conditions stated in an advertisement and circular of the Secretary of the Navy, dated August 3, 1903, proposals of the Midvale Steel Company under said advertisement, and a printed circular and specifications concerning armor plate and appurtenances for vessels of the United States Navy, approved by the Secretary of the Navy November 30, 1903.

XXVIII.

That under said contract the Midvale Steel Company used and employed the Harvey process aforesaid in the treatment of armor plates, and have, up to December 7, 1906, manufactured and delivered to the Navy Department of the United States face-hardened armor plates in accordance with the aforesaid Harvey process, and which have been accepted by the said Navy Department (and which were in fact made and treated in substantially the same manner as those heretofore recited as made for the said Navy Department, and upon which this court finally adjudicated and decreed that the petitioner was entitled to recover royalty from the defendant) to at least the amount of four thousand five hundred and fifty and fourteen hundredths (4,550.14) tons, or ten million one hundred and ninety-two thousand three hundred and thirteen (10,192,313) pounds, for which royalties are due your petitioner under its contract of April 12, 1893, with the United States aforesaid to the sum of more than fifty thousand nine hundred and sixty-one dollars and fifty-six cents ($50,961.56); that under said contract of December 15, 1903, the said Midvale Company, since December 7, 1906, has continued to manufacture for and deliver to, or intends to manufacture for and deliver to, the said United States, and the said United States, since December 7, 1906, has continued to accept, or intends to accept, face-hardened armor plates manufactured and treated by the Harvey process as aforesaid to the extent of at least two million eight hundred and thirty-one thousand and forty-seven pounds (2,831,047); but your petitioner cannot state, and cannot ascertain the precise number of pounds of said armor plate actually manufactured and delivered by the said Midvale Company, or accepted by the United States since December 7, 1906, and consequently cannot state and cannot ascertain the precise amount of royalty due your petitioner, without an examination of the records or papers of the said Navy Department which will disclose the number of pounds of said armor plate manufactured and delivered by the Midvale Steel Company and accepted by the United States under the said contract of December 15, 1903, since December 7, 1906. Your petitioner therefore prays that this court grant an order calling upon the Navy Department for such information, records, or papers as may be deemed necessary to disclose the number of pounds of said armor plate made,

delivered, and accepted since December 7, 1906, and that when such information is furnished your petitioner may have leave to file an amendment to this amended petition, or an amended petition to take the place of this amended petition.

XXIX.

That by the said contract made and entered into on December 15, 1903, by and between the said The Midvale Steel Company and the United States, the United States authorized the said company to use and employ the said Harvey process or a process satisfactory to and approved by the Navy Department of the United States, in the treatment of the armor plates manufactured under said contract, and that the said company did in fact use and employ the said Harvey process in the treatment of such armor plates so manufactured and delivered to, and accepted by, the United States, in execution of said contract, and that said process by which the said company so manufactured and treated the said armor plate for, and delivered to, and accepted by the United States aforesaid, and in accordance with said contract, and the said armor plates were satisfactory to and approved by the said Navy Department; that the weight of said finished armor plates so treated and supplied to the United States by the said The Midvale Steel Company since the 15th day of December, 1903, and up to December 7, 1906, has amounted to more than four thousand five hundred and fifty and fourteen hundredths (4,550.14) tons, or ten million one hundred and ninety-two thousand three hundred and thirteen (10,192,313) pounds, and that royalties at the rate of one-half of one cent per pound for the said finished plates due your petitioner under its said contract of April 12, 1893, with the United States aforesaid have amounted to more than fifty thousand nine hundred and sixty-one dollars and fifty-six cents ($50,961.56), and more than the sum of fifty thousand nine hundred and sixty-one dollars and fifty-six cents ($50,961.56) is now wholly due to your petitioner and is unpaid.

XXXII.

There is now due and owing from the said United States to your petitioner, under said agreement of April 12, 1893, as royalties for armor plates manufactured and supplied to the United States by the said The Midvale Steel Company, up to December 7, 1906, the sum of more than fifty thousand nine hundred and sixty-one dollars and fifty-six cents ($50,961.56), no part of which has been paid.

XXXIII.

That the said Government of the United States still continues to make and enter into new contracts, not set forth herein, with the said The Midvale Steel Company for the manufacture and delivery of armor plates, and specifically did enter into such contracts on April

5, 1905, and August 6, 1906, respectively, and that the said company under such new contracts has used and employed or proposes to use and employ the said Harvey process in the treatment of armor plates, and has delivered or intends and proposes to deliver armor plates so treated to the United States, and which process and armor plates have been approved and accepted by the United States, or it in-
31 tends to approve and accept the same, and on which there is due or will be due from the United States to your petitioner under said contract of April 12, 1893, large amounts of royalties; but your petitioner cannot state its case or claim, so far as it is based on the said new contracts mentioned in this paragraph of this petition, with requisite particularity, until it is informed by the Navy Department of the exact number of pounds of armor plate so delivered to and accepted by it and the United States under said new contracts. Your petitioner therefore prays that this court grant an order calling upon the said Navy Department for such information, records, or papers and new contracts as may be deemed necessary to disclose to your petitioner the dates and the character of said new contracts and the number of pounds of said armor plates made and delivered by The Midvale Steel Company to and accepted by the United States thereunder, and that when such information is furnished your petitioner may have leave to file an amendment to this petition or an amended petition to take the place of this amended petition.

Your petitioner therefore prays the court that judgment may be rendered in its favor of the sum of fifty thousand nine hundred and sixty-one dollars and fifty-six cents ($50,961.56) and so much additional thereto as the royalties may in fact amount to at the commencement of this action or at the time of entry of the final decree herein.

(2) That said contracts between the United States and The Midvale Steel Company have been offered in evidence by the claimant and are marked, respectively:

"Claimant's Exhibit No. 6, Midvale contract of December 15, 1903, July 15, 1907, J. A. S., U. S. Exr."

"Claimant's Exhibit No. 7, Midvale contract of April 5, 1905, and papers relating thereto, July 15, 1907, J. A. S., U. S. Com'r."

"Claimant's Exhibit No. 8, Midvale contract of Aug. 6, 1906, and papers relating thereto, July 15, 1907, J. A. S., U. S. Com'r."

32 (3) That in said contract of 1903 the following clauses occur:

"Should the party of the first part desire to make use of the so-called 'Harvey process' in the manufacture of armor under this contract, the party of the second part hereby authorizes the party of the first part to use said process under the license granted to the United States by the Harvey Steel Company of New Jersey, dated April 12, 1893; and the party of the second part hereby agrees to assume, and does assume, responsibility for royalty that may become due to the Harvey Steel Company of New Jersey for the use of said process in the manufacture of armor under this contract by the

party of the first part to the extent of the royalty specified in said license authorizing said party of the second part to use said process, namely, one-half of 1 cent a pound ($11.20 a ton); provided, that if said party of the second part pays the aforesaid royalty of one-half of 1 cent a pound ($11.20 a ton) for the use of the 'Harvey process' by the party of the first part in connection with the manufacture of any armor under this contract, an equal amount shall be deducted by the party of the second part from the price to be paid to the party of the first part, specified in clauses (a) and (b) of clause first of this contract.

"It is, however, expressly understood that in agreeing to the above provision as to payment and deduction of royalty for the Harvey process the party of the first part does not acknowledge the validity of any patent or patents covering the so-called 'Harvey process," nor does it surrender the right to recover, by suit or otherwise, any royalties which may be paid by the party of the second part under its license with the Harvey Steel Company of New Jersey, herein referred to, for armor manufactured by the pa'ty of the first part under this contract, nor does the party of the first part surrender by agreeing to the above its right to contest the validity of any patent or patents bearing upon the said 'Harvey process.'"

33 (4) That in said contracts of 1905 and 1906 occurs the following clause:

"The party of the first part, in consideration of the premises, hereby covenants and agrees to hold and save the United States harmless from and against all and every demand or demands of any nature or kind for or on account of the adoption of any plan, model, design, or suggestion, or for or on account of the use of any patented invention, article, process, or appliance that has been or may be adopted or used by the party of the first part, in or about the manufacture or production of said armor plates and appurtenances, or any part thereof, under this contract, and to protect and discharge the Government from all liability on account thereof or on account of the use thereof, by proper releases from patentees or otherwise, and to the satisfaction of the Secretary of the Navy."

(5) That the question at issue between the claimant and the United States involved in this suit is whether in the manufacture of armor plate by The Midvale Steel Company, under said contracts, the "Harvey process" was involved or used.

(6) Your petitioner alleges that it has never used the "Harvey process," and specifically alleges that it has never used the "Harvey process" in the manufacture of armor plate under the contract of 1903 or under the contract of 1905 or under the contract of 1906.

(7) That under the contract of 1903, by the clause quoted in paragraph 3, in the event of judgment for the claimant, as your petitioner is advised, the United States would have the right to deduct from the price to be paid to Midvale Steel Company with respect to any armor plate remaining open under the said contract the amount of

royalty paid by the United States for any use by Midvale Steel Company of the "Harvey process."

34 (8) That under the contracts of 1905 and 1906, by the clause quoted in paragraph 4, in the event of judgment for the claimant, as your petitioner is advised, the right of the Government to recover over against said Midvale Steel Company the amount of said judgment will either be established or the rights of said Midvale Steel Company to resist said recovery seriously impaired.

In view of the facts in the foregoing clauses stated, your petitioner prays that it may be allowed to intervene on the part of the defendant and be represented by counsel and take part in the defense of said suit in order to protect its interests, which are or may be affected by said suit.

THE MIDVALE STEEL CO.,
(Signed) H. M. DEEMER, *Secy.* (Seal.)

35 STATE OF PENNSYLVANIA,
City and County of Philadelphia, ss:

H. M. Deemer, being duly sworn, deposes and says:

I am the secretary of the Midvale Steel Company, the petitioner herein. I have read over and know the contents of said petition. The facts stated therein of my personal knowledge are true and those stated upon information and belief I believe them to be true.

(Signed) H. M. DEEMER.

Sworn to and subscribed before me this 11th day of January, A. D. 1909.

(SEAL.) (Signed) JOSEPH ENTWISLE, *Notary Public,*
235 East Upsal Street, Germantown, Phila., Pa.

Commission expires April 17, 1911.

36 III. TRAVERSE.

(Filed January 17, 1911.)

In the Court of Claims of the United States. December term, A. D. 1911.

HARVEY STEEL CO.
vs.
THE UNITED STATES. } No. 20899.

And now comes the Attorney General, on behalf of the United States, and answering the petition of the claimant herein, denies each and every allegation therein contained; and asks judgment that the petition be dismissed.

JOHN Q. THOMPSON,
Assistant Attorney General.

37 IV. ARGUMENT AND SUBMISSION OF CASE.

On January 17, 1911, this case came on to be heard. Mr. James R. Sheffield was heard for the claimant, and Mr. Philip M. Ashford was heard for the United States. On January 18, 1911, Mr. Ashford was heard further in behalf of the United States; Mr. Frank S. Busser was heard for the Midvale Steel Company, intervenor, as was also Mr. A. H. Winterstein; Mr. Sheffield closed for the claimant, and the case was submitted.

38 V. FINDINGS OF FACT AND ULTIMATE CONCLUSION OF FACT AND CONCLUSION OF LAW AND OPINION OF THE COURT. (Filed March 27, 1911.)

HARVEY STEEL COMPANY *v.* THE UNITED STATES, AND THE MIDVALE STEEL COMPANY, INTERVENOR.

This case having been heard by the Court of Claims, the court, upon the evidence, makes the following

FINDINGS OF FACT:

I.

The Harvey Steel Co., claimant herein, is now, and at all times since the year 1887 has been, a corporation created, organized, and existing under the laws of the State of New Jersey.

The Midvale Steel Co., the intervenor herein, is a corporation organized under the laws of the State of Pennsylvania, and has its principal place of business and works at Nicetown, in the city of Philadelphia, Pa.

II.

The proceedings and findings of fact in the prior case between said Harvey Steel Co. and the United States, No. 21110, and by reference made a part hereof, are set forth in 38 Court of Claims, pages 664 to 689, wherein on the construction of the same contract judgment was rendered in favor of said Harvey Steel Co. in the sum of $60,806.45, which on appeal to the Supreme Court was affirmed. (196 U. S., 310.)

Subsequently findings of substantially the same character were filed in case No. 25267 for royalties under the same contract, and judgment, without opinion, was rendered in favor of the claimant in the sum of $650,132.17, from which no appeal was taken.

III.

The "Harvey process" mentioned in the contract of April 12, 1893, as defined and set forth in letters patent No. 460262 is as follows:

"1. The herein-described method of producing a decrementally hardened tenacious armor plate, which consists of inclosing a low

steel plate between a mass of noncarbonaceous material on one
30 side and a mass of granular carbonaceous material firmly packed upon the other side contained in a compartment formed within the heating chamber of a suitable furnace and in maintaining the said heating chamber for a predetermined period of time at a temperature above the melting point of cast iron, and in subsequently chilling said plate, whereby a stratum of steel of prescribed thickness upon the side of the plate against which said carbonaceous material has been pressed is made to acquire a heterogeneous crystalline structure and a condition of excessive hardness upon its exposed surface and a condition of gradually diminishing hardness as the depth from said surface increases."

The Harvey process actually used was as follows: The scaled plate was covered by carbonaceous material, either by putting the carbonaceous material on the bottom of the furnace and placing the plate thereon with the scaled side down or by placing the carbonaceous material on the plate and using another plate on top of it to insure contact. The plates were then placed in the furnace and the side which was not to be carbonized was protected, at first, by sand. Later the bottom plate was placed on transverse brick piers of the movable furnace with the scaled side up; a frame of angles was then placed on the scaled side of the plate. The space was then filled with carbonaceous material, well packed and raised about an inch above the height of the angle. Another plate was then placed on top of this structure with the scaled side down toward the carbonaceous material. The car was then run into the furnace and the fire started.

The noncarbonaceous material actually used in the "Harvey process," consisted of sand packed at the back of the plate to protect the same from the carbonaceous material and excessive heat, of which the Government was advised by the patentee by an exhibition of the process with the use of sand prior to the contract of April 12, 1893.

The use of sand was gradually discontinued, because the same result could be accomplished without it, and some of the companies manufacturing plates were so advised late in 1893. Since 1904 no sand or other noncarbonaceous material has been used by the Carnegie and Bethlehem companies manufacturing armor plate.

The process used by the Midvale Steel Co., in the manufacture and production of armor plate was as follows: The plate to be carbonized was mounted, face up, on brick piers about 18 inches high resting on the car bottom, about 1 foot apart. A row of bricks, 2 high, was then placed around the plate and the carbonizing material was put inside of these bricks on the face of the plate and raised about three-fourths of an inch above the bricks. Mortar was edged up on the second bricks. Then the second plate was placed on the carbonizing material, face down. The plates were then run into the furnace and the fire started.

The brick box containing the carbonaceous material prevented the same from reaching the back and sides of the plates, thus accom-

plishing the same result as with the sand which was used to protect the back of the plate from the carbonaceous material and excessive heat as aforesaid.

IV.

By an act approved on or about March 3, 1903, Congress authorized the construction of five battleships for the United States Navy, which were known respectively as Nos. 20, 21, 22, 23, and 24, and subsequently named the "Vermont," "Minnesota," "Kansas," "Mississippi," and "Idaho."

On or about August 3, 1903, the United States, by the Acting Secretary of the Navy, issued an advertisement and circular inviting proposals for the supply of armor plates for said battleships, said advertisement and circular stating to the bidders, among other things, the following:

"Bids are invited for supplying the following named materials: About 14,410 tons, more or less, of improved face-hardened armor, to be of the best material and of domestic manufacture, treated, as shown by the specifications, by a process of face hardening approved by the department and applied to plates of 5 inches and more in thickness, to be designated as class 'A'; about 1,360 tons of the best face-hardened armor, treated by the so-called Harvey process or by such process as may be approved by the department and applied to plates to be face hardened, of a thickness of less than 5 inches, designated as class 'B.'"

The Midvale Steel Co., by proposals, dated on or about October 1, 1903, proposed and agreed to furnish to the United States the said armor plate called for in and in accordance with said circular and advertisement of August 3, 1903, and upon the terms and conditions stated therein.

V.

In pursuance of and in accordance with the said advertisement, circular, and proposals, and on or about December 15, 1903, the United States, by its Secretary of the Navy, made and entered into a written contract with the said Midvale Steel Co., in which the latter agreed to manufacture and deliver to the Navy Department of the United States, in accordance with the terms and conditions of the contract, 5,336 tons, more or less, of the best and most resisting quality of said class A armor, to be manufactured, carbonized, face hardened, and treated by the most approved method, and by a process satisfactory to and approved by the Navy Department, and 478 tons of the best and most resisting quality of class B armor, to be manufactured, carbonized treated, and face hardened by a process satisfactory to and approved by the Navy Department, the said contract providing, among other things, as follows:

"Should the party of the first part desire to make use of the so-called 'Harvey process' in the manufacture of armor under this contract, the party of the second part hereby authorizes the party of

the first part to use said process under the license guaranteed to the United States by the Harvey Steel Co. of New Jersey, dated April 19, 1893; and the party of the second part hereby agrees to assume, and does assume, responsibility for royalty that may become due to the Harvey Steel Co. of New Jersey for the use of the said process in the manufacture of armor under this contract by the party of the first part to the extent of the royalty specified in said license 41 authorizing said party of the second part to use said process, namely, one-half of 1 cent a pound ($11.20 a ton); provided, that if said party of the second part pays the aforesaid royalty of one-half of 1 cent a pound ($11.20 a ton) for the use of the 'Harvey process' by the party of the first part in connection with the manufacture of any armor under this contract, an equal amount shall be deducted by the party of the second part from the price to be paid to the party of the first part, specified in clauses (a) and (b) of clause first of this contract."

The circular and specifications of the Navy Department which form a part of the contract gave the right to the Government to keep inspectors at the works of the Midvale Steel Co., and to have full access to all parts of such works where the manufacture of the armor was carried on, as well as the right to witness all "the processes of manufacture, and to examine the contractor's records with reference to such matters." In addition, the circular and specifications provide that—

"A written statement of the work and the contractors' tests to be commenced and in progress each day must be furnished to the chief inspector, and at such times as will allow him to witness the various treatments should he so desire."

The contract itself further provides:

"When all the plates of a group of armor are forged and ready for carbonizing, the first payment therefor of thirty per cent of the contract price of the armor constituting such group shall be made; a second payment of thirty per cent of the contract price of the group shall be made when all of the plates constituting said group are carbonized and face hardened. * * *

"Tenth. The party of the first part, in consideration of the premises, hereby covenants and agrees to hold and save the United States harmless from and against all and every demand or demands of any nature or kind for or on account of the adoption of any plan, model, design, or suggestion, or for or on account of the use of any patented invention, article, process, or appliance that has been or may be adopted or used by the party of the first part, in or about the manufacture or production of said armor plates and appurtenances, or any part thereof, under this contract, except the so-called 'Harvey process' and the use of nickel as an alloy, as hereinbefore provided, and to protect and discharge the Government from all liability on account thereof or on account of the use thereof by proper releases from patentees or otherwise, and to the satisfaction of the Secretary of the Navy.

4. No payment shall be made except upon bills in quadruplicate, certified by the inspectors in such manner as shall be directed by the Secretary of the Navy, whose final approval of all bills thus certified shall be necessary before payment thereof."

Payments have been made in accordance with said provision by the United States to the Midvale Steel Co., and no deductions were made from said payments on account of royalties provided for by the contract of April 19, 1898, between the Harvey Steel Co. and the United States.

VI.

The weights of the finished plates of said armor of Classes A and B, and ballistic plates manufactured for the United States and delivered to it by the Midvale Steel Co., and paid for and accepted by the United States, in each year from the beginning of said manufacture, treatment, and shipment, to September 29, 1906, under and in compliance with said contract of December 15, 1905, and the vessels of the United States to which the plates were applied were, according to the United States Navy Department, as follows:

Year of delivery.	Name of vessel.	Class A.	Class B.	Total tons per year.
1905	Mississippi	Tons. 1,105.69	Tons. 42.99	
	Idaho	76.85	56.97	
	Ballistic plates	22.39		1,353.89
1906	Mississippi	1,475.69	120.79	
	Idaho	1,231.19	124.37	
	Ballistic plates	127.57	5.66	3,085.27
1907	Mississippi	221.69		
	Idaho	825.69	4.41	651.79
Total		4,986.69	385.19	5,390.95

VII.

The Congress of the United States, by act approved on or about April 27, 1904, authorized the construction of one battleship and two armored cruisers for the United States Navy. The battleship was known as "battleship No. 25" and the armored cruisers as "Nos. 3 and 18," respectively. The battleship was afterwards named the "New Hampshire" and the armored cruisers the "North Carolina" and the "Montana."

On or about the 8th day of December, 1904, the United States, by the Secretary of the Navy, issued an advertisement and circular inviting proposals for the supply of armor plates for said battleship and armored cruisers, said advertisement and circular stating to the bidders, among other things, the following:

"Bids are invited for supplying the following-named materials: About 3,700 tons, more or less, of improved face hardened armor, to be of the best material and of domestic manufacture, treated, as hereinafter shown by the specifications, by a process of face hardening approved

by the department and applied to plates of more than 5 inches in thickness, to be designated as Class 'A;' and about 3,700 tons of the best face hardened armor, treated by the so-called Harvey process or by such process as may be approved by the department and applied to plates to be face hardened, of a thickness of 5 inches and less, designated as Class 'B.'"

The said Midvale Steel Co., by proposals dated on or about January 11, 1905, proposed and agreed to furnish to the United States the said armor plate called for in, and in accordance with, the said circular and advertisement of December 8, 1904, and upon the conditions and terms stated therein.

48 VIII.

In pursuance of and in accordance with said advertisement, circular, and proposals, and on or about the 5th day of April, 1905, the United States, by its Secretary of the Navy, made and entered into a written contract with the said Midvale Steel Co., in which the latter agreed to manufacture and deliver to the Navy Department of the United States in accordance with the terms and conditions of the contract, 703 tons, more or less, of the best and most resisting quality of Class A armor, to be manufactured, carbonized, face-hardened, and treated by the most improved method, by a process satisfactory to and approved by the Navy Department; and 208 tons, more or less, of the best and most resisting quality of Class B armor to be manufactured, carbonized, treated, and face-hardened by a process satisfactory to and approved by the Navy Department. The circulars and specification of this contract also contained provisions as to right of the Government to witness all processes of making the armor, similar to the provisions of the contract of December 15, 1903.

The contract itself further provides:

"When all the plates of a group of armor are forged and ready for carbonizing, the first payment therefor of 30 per cent of the contract price of the armor constituting such group shall be made; a second payment of 30 per cent of the contract price of the group shall be made when all of the plates constituting said group are carbonized and face hardened. * * *

"4. No payment shall be made except upon bills in quadruplicate certified by the inspectors in such manner as shall be directed by the Secretary of the Navy, whose final approval of all bills thus certified shall be necessary before payment thereof."

Payments have been made in accordance with said provision by the United States to the Midvale Steel Co.

IX.

The weights of the finished plates of said armor of Classes A and B, and ballistic plates manufactured for the United States and delivered to it by the Midvale Steel Co., and paid for and accepted by

the United States in each year from the beginning of said manufacture, treatment, and shipment to September 29, 1906, under and in compliance with said contract of April 5, 1905, and the vessels of the United States Navy to which the plates were applied were, according to the United States Navy Department, as follows:

Year of delivery.	Name of vessel.	Class A.	Class B.	Total tons per year.
		Tons.	Tons.	
1906	Ballistic plates	6.91		6.91
1907	North Carolina		70.31	
	Montana 84.90 less 4.12	80.68	89.80	
	New Hampshire	611.52		
1907	Ballistic plate	5.74		861.14
	Total	710.85	160.20	871.0

44

X.

The Congress of the United States, by an act approved on or about March 3, 1905, authorized the construction of two battleships known as battleships Nos. 26 and 27 and subsequently named the "Michigan" and the "South Carolina," respectively.

Subsequently the United States, by its Secretary of the Navy, issued an advertisement inviting proposals for the supply of armor for said battleships, and a circular and specification dated on or about March 21, 1906, concerning said armor plate.

The Midvale Steel Co., by proposals dated on or about the 10th day of July, 1906, proposed and agreed to furnish to the United States in accordance with the said advertisement and said circular and specifications, 7,024 tons of Class A armor plate and 10 tons of Class B armor plate for said battleships Nos. 26 and 27.

XI.

In pursuance of and in accordance with said advertisement and said circular and specifications, on or about the 6th day of August, 1906, the United States, by its Secretary of the Navy, made and entered into a written contract with the said Midvale Steel Co., in which the latter agreed to manufacture and deliver to the Navy Department of the United States, in accordance with the terms and conditions of the contract, 3,514 tons, more or less, of the best and most resisting quality of Class A armor, manufactured, treated, carbonized, and face-hardened by the most improved method by a process satisfactory to and approved by the Navy Department, and 5 tons, more or less, of the best and most resisting quality of Class B armor, to be manufactured, treated, carbonized, and face-hardened by a process satisfactory to and approved by the Navy Department. The circulars and specification of this contract also gave the Government the said right of inspection of the armor processes of the Midvale Steel Co. used in manufacturing the armor.

The contract further provides:

"When all the plates of a group of armor are forged and ready for carbonizing, the first payment therefor of thirty per cent of the contract price of the armor constituting such group shall be made; a second payment of thirty per cent of the contract price of the group shall be made when all the plates constituting said group are carbonized and face hardened. * * *

"4. No payment shall be made except upon bills in quadruplicate certified by the inspectors in such manner as shall be directed by the Secretary of the Navy, whose final approval of all bills thus certified shall be necessary before payment thereof."

Payments have been made in accordance with said provision by the United States to the Midvale Steel Co.

XII.

The weights of the finished plates of said armor of Classes A and B manufactured for the United States and delivered to it by the Midvale Steel Co., and paid for and accepted by the United States in each year from the beginning of said manufacture, treatment, and shipment to September 29, 1908, under and in compliance with said contract of August 6, 1906, and the vessels of the United States Navy to which the plates were applied, were, according to the United States Navy Department, as follows:

Year of delivery.	Name of vessel.	Class A.	Class B.	Total tons per year.
		Tons.	Tons.	
1907	Michigan, 364.34 less 3.16	361.18	5.08	
1907	Michigan	232.97		
1907	Ballistic plates	81.76		725.98
1908	Michigan	1,891.43		
	Ballistic plates	105.07		1,996.50
Total		2,712.40	5.08	2,717.48

XIII.

On or about August 29, 1907, the United States, by its Acting Secretary of the Navy, made and entered into a written contract with the said Midvale Steel Co., in which the latter agreed to manufacture and deliver to the Navy Department of the United States, in accordance with the terms and conditions of the contract, 1,871 tons, more or less, of the best and most resisting quality of said Class A armor, "manufactured by the most improved method by a process satisfactory to and approved by" the Navy Department, and 227 tons, more or less, of the best and most resisting quality of Class B armor, "to be manufactured by a process satisfactory to and approved by" the Navy Department, for battleships Nos. 28 and 29, or such other ships as may be selected by the Navy Department.

XIV.

The weights of the finished plates of said armor of Classes A and B, manufactured for the United States, and delivered to it by the Midvale Steel Co., and paid for and accepted by the United States, in each year from the beginning of such manufacture, treatment, and delivery, to September 29, 1908, under and in compliance with said contract of August 29, 1907, and the vessels of the United States Navy to which the plates were applied, were, according to the United States Navy Department, as follows:

Year of delivery.	Name of vessel.	Class A.	Class B.	Total tons per year.
		Tons.	Tons.	
1907	North Dakota	47.61	214.24	261.85
1908	Ballistic plates		8.63	8.63
Total		47.61	222.87	270.48

Payments for all armor covered by the contract of August 29, 1907, have been made to the Midvale Steel Co. except the final reservation amounting to $15,123.10, which is withheld until expiration of the required period after emplacement of the last plate on the ship.

46 Each of said contracts of April 5, 1905, August 6, 1906, and August 29, 1907, between the Midvale Steel Co. and the United States contains the following provision:

"The party of the first part, in consideration of the premises, hereby covenants and agrees to hold and save the United States harmless from and against all and every demand or demands of any nature or kind for or on account of the adoption of any plan, model, design, or suggestion, or for or on account of the use of any patented invention, article, process, or appliance which has been or may be adopted or used by the party of the first part, in or about the manufacture or production of said armor plates and appurtenances, or any part thereof, under this contract, and to protect and discharge the Government from all liability on account thereof or on account of the use thereof by proper releases from patentees or otherwise, and to the satisfaction of the Secretary of the Navy."

XV.

In the manufacture and production of said classes A and B armor plate as aforesaid, the Midvale Steel Co., under their contracts of December 15, 1903, April 5, 1905, August 6, 1906, and August 29, 1907, did not use sand or any other noncarbonaceous material to protect the back of the plate in the carbonization or supercarbonization of said plates.

In all other respects said Midvale Steel Co. used the steps designated in the Harvey patent No. 460,202, known as the "Harvey

process," of said contract of April 12, 1893, between the claimant herein and the United States, and as communicated at various times by claimant to the officers and agents of the United States and as actually used under the inspection, supervision, and with the approval of said officers and agents; and the face hardening process so used by the Midvale Steel Co. was substantially the same as the "Harvey process" hereinbefore described, and the same result was accomplished without the use of sand or other noncarbonaceous material.

XVI.

On June 9, 1906, the Harvey Steel Co. addressed a letter to the Navy Department, Washington, D. C., setting up the claim that the Midvale Steel Co. was using the "Harvey process" in the manufacture of armor plate for naval vessels under the contracts between the Midvale Steel Co. and the United States then in force, and that the United States were obligated by their contract of April 12, 1893, to pay royalties to said Harvey Steel Co. on said armor plate. This letter was referred to the Midvale Steel Co. for a statement as to the facts in relation to whether or not it was using the "Harvey process" in the manufacture of said armor plate, and to it the Midvale Steel Co. replied, June 25, 1906, in effect that it was not using the "Harvey process," nor anything that could be construed as the "Harvey process." This letter, or a copy thereof, was transmitted to Messrs. Betts, Sheffield & Betts, attorneys for the Harvey Steel Co., on June 27, 1906, and the original petition herein was filed December 3, 1906.

47

XVII.

The total weight of the finished plates of said armor so manufactured, treated, carbonized, and face-hardened by the "Harvey process" and delivered to the United States by the said Midvale Steel Co. and paid for and applied by the United States to the said vessels of its Navy up to September 28, 1908, under said contracts of December 15, 1903, April 5, 1905, August 6, 1906, and August 27, 1907, amounts to 9,049.11 tons or 20,207,006 pounds, which, at a royalty of one-half of 1 cent per pound, or $11.20 per ton, for the finished plate amounts to the sum of $101,350.03.

The claimant has applied to the United States and the Secretary of the Navy for the payment of said royalty, which has been refused.

XVIII.

The total weight of finished plates of said armor so manufactured, treated, carbonized, and face-hardened by the "Harvey process" under said contract of August 6, 1906, up to September 28, 1908, but delivered to and accepted by the United States after said last-named date by the Midvale Steel Co., and applied by the United States to

vessels of its Navy, amounts to 909.99 tons or 2,038,377 pounds, which, at a royalty of one-half of 1 cent per pound, or $11.20 per ton, for the finished plate, amounts to the sum of $10,191.88.

XIX.

The total weight of finished plates of said armor so manufactured, treated, carbonized, and face-hardened by the "Harvey process" under said contract of August 29, 1907, up to September 28, 1908, but delivered to and accepted by the United States after said last-named date by the Midvale Steel Co. and applied by the United States to vessels of its Navy, amounts to 1,064.76 tons or 2,385,063 pounds, which, at a royalty of one-half of 1 cent per pound, or $11.20 per ton, for the finished plate, amounts to the sum of $11,925.32.

Claimant has applied to the United States and the Secretary of the Navy for the payment of said royalties, which has been refused.

CONCLUSION OF FACT.

Upon the foregoing findings of fact the court finds the ultimate facts, so far as they are questions of fact, that the Midvale Steel Co. in the manufacture of armor plate for the Government used substantially the Harvey process, covered by said contract of April 12, 1893, as defined in the patent.

CONCLUSION OF LAW.

Upon the foregoing findings of fact the court decides, as a conclusion of law, that the claimant is entitled to recover judgment against the United States on findings 17, 18, and 19 in the sum of one hundred and twenty-three thousand, four hundred and sixty-seven dollars and twenty-three cents ($123,467.23).

The intervening petition of the Midvale Steel Co. is dismissed.

48 OPINION.

PEELE, Ch. J., delivered the opinion of the court:

This is a claim for royalties under an express contract by the Harvey Steel Co. with the United States for the use of what is known as the "Harvey process" in hardening armor plate. The reasoning, arguments, and conclusions of the court in the case between the same parties involving the construction of the same contract, wherein judgment was rendered in favor of the claimant in a former suit (38 C. Cls., 662, 681), which judgment on appeal was affirmed by the Supreme Court (196 U. S., 310, 313), apply in the present case, and hence little need be said.

In the present case the contention of the defendants and the intervenor is that in the hardening or Harvey process referred to, one of the elements required was the use of sand, a noncarbonaceous mate-

rial packed in the back of the plates, and that if not so used it can not be contended that the Harvey process was applied by the Midvale Steel Co. in the process which it used in hardening the plates under its several contracts with the United States, though in other respects it concedes that the Harvey process was substantially used. Its contention is that it did not use sand. That is to say, that it accomplished the same result without, as had been accomplished with sand; and it may be added that the same result was accomplished without the use of any noncarbonaceous material in the back of the plates by confining the carbonaceous material within the brick box, as set forth in the findings.

The only difference, therefore, between the cases which heretofore went to judgment (one of which was affirmed by the Supreme Court) and the present case is that in the former suits sand was used in the back of the plates, and the question is, Shall this technical change defeat the right of recovery in this case? We say technical, because the use of sand was not, as a matter of fact, essential to the Harvey process of carbonizing armor plate.

In the first contract referred to in the findings with the Midvale Steel Co. the Government gave the company the option of using the Harvey process or any other hardening process which might be satisfactory to the United States; and in the subsequent contracts, as disclosed by the findings, the hardening process was simply to be satisfactory to the United States, but, as a matter of fact, under all the contracts referred to the Harvey process was used except in the elimination of sand in the back of the plates. As disclosed in the former case (38 C. Cls., 684), contracts were entered into with the Bethlehem Iron Co. and the Carnegie Steel Co., and the plates manufactured by those companies were received by the officers of the Ordnance Bureau of the Navy Department and paid for "as armor treated by the Harvey process," and, as was said in that case (p. 685), "when the armor plates manufactured by the Bethlehem and Carnegie companies were completed, and delivered, and accepted, and paid for, the claimant's cause of action certainly was complete. At that time the process was as satisfactory to the Secretary of the Navy as it ever had been. No rival inventor had appeared claiming that it was an infringement of another patent; no court had decided that the patentee 'was not legally entitled' to own and contract the exclusive right to the use of the process; no suit was pending on the 17th of November, 1897, when the claimant demanded payment, in which the validity of the patent was in issue. The royalty was due and payable then. The defendants had no defense to interpose at that time, and they can not interpose one of their own subsequent making now."

"A plainer case of estoppel never came before a court. The defendants first bound the claimant's hands by a contract which secured the right to themselves to use the invention and precluded the claimant from prosecuting the manufacturers as infringers. They next closed the claimant's eyes as against the manufacturers by adver-

tising that the plates to be made were to be treated by the 'Harvey process,' and that 'the prices bid for armor treated by the Harvey process must not include anything for royalties, as the department has acquired the right to use said process, and will indemnify the contractor against all claims therefor.' They did not rescind the contract or give a notice which would have put the claimant on its guard, or enabled it to proceed against the manufacturers, but stood silent until the work was done and they had received the fruits of their agreement. Having received every possible benefit that was assured to them by the contract, they now seek to evade its obligations. Their position is that of a man who, to avoid the dangers and costs of an action in trespass or ejectment, enters under a lease and then seeks to evade the payment of rent by assuming the attitude of a wrongdoer and denying his landlord's title."

Furthermore, as was said in that case (p. 686), "the same principle applies to the defense that the armor plates were not manufactured according to the Harvey process, as defined and limited in the patent. The claimant had brought the process to the defendants before it was patented, and they have never been able to obtain the desirable plate except by the use of the process, patented or unpatented. The variations from the patent, if any there were, were trivial—so trivial that they were not known to the manufacturers when they made the plates, or to the defendants' officers who supervised the making. They were not discovered by the Ordnance Bureau until after the first work was completed, but they were known to the bureau when the last work, the work involved in the case, was contracted for, as plates to be manufactured by the Harvey process and under the Harvey patent and in pursuance of the Harvey contract." * * * "The variations from the patented process, if substantial, would have practically stricken down the patent and left the invention valueless. There was but one way in which that issue could be properly tried, and that was by an action for infringement."

* * * "If it should be said that the invalidity of the patent or the exceedingly restricted construction which the defendants seek to place upon it constitute a failure of consideration, it must be replied that the agreement itself contains a complete refutation of that defense." * * * "In a word, this is a case where a man without fraud or misrepresentation entered into a contract; where he received from the other party all that the contract promised him or that he expected to receive; where he kept his mouth closed when he should have spoken, and withheld a defense when he should have interposed it; where, by his silence and his words, he misled the other contracting party and thereby deprived him of his legal right to the adjudication of courts of competent jurisdiction, which adjudication might be favorable to the other party and cause irreparable loss and injury to himself. Such a man is not entitled to set up in an action on the contract the defenses which the defendants' executive officers have insisted on interposing in this case."

What was there said by this court in the former suit is equally applicable in the present case.

The Supreme Court on appeal, in affirming the judgment of this court (196 U. S., 310, 313), reviews the experiments by the Navy Department as to the value of the process and the several contracts entered into giving the Navy Department the option of purchasing the process upon the payment of a fixed sum for all vessels authorized by Congress up to and including July 19, 1892, and a half a cent a pound on all vessels authorized thereafter; the United States being held harmless from further claims and demands on account of alleged infringement of patented rights appertaining to said process and to furnish full information regarding the composition and application of all improvements which it might make upon said process.

The right to the use of the process was given to the Government, and in response to the contention and defense that the patent was invalid, and for that reason the claimant company was not entitled to receive royalty thereunder, the Supreme Court (p. 316) said: "The argument is put mainly on the construction of the clause quoted, coupled with the further agreement that the United States ought not to be estopped as licensee to deny the validity of the patent because it is not a vendor but simply a user of the patented article, and therefore has not enjoyed the advantage of a practical monopoly, as a seller might have enjoyed it even if the patent turned out to be bad. This distinction between sale and use, even for a noncompetitive purpose, does not impress us. So far as the practical advantage secured is matter for consideration, whether a thing made under a patent supposed to be valid is used or sold, it equally may be assumed that the thing would not have been used or sold but for the license from the patentee. We regard the clause in the contract as the measure of the appellant's rights." * * * "It is argued that the agreement was only to pay for the use of the process covered by the patent named, and that if the meaning of the parties was to cover anything broader than the patent, even what was known in their speech as the Harvey process, that meaning could be imported into the contract only by reformation, not by construction of the contract as it stands. But we are of opinion that this defense also must fail. In the first place, it is not fully open on the record. The findings asked had a different bearing. All that were asked might have been made without necessitating a judgment for the United States as matter of law and the court believed that the difference between patent and process was trivial. But we should hesitate to admit the defense in any event. The argument is that at the time of the contract it was supposed that the heat required for the process was greater than that actually used, that the patent was valid only for a process with the greater heat, and that the contract covers no more than the patent. But the fact that the parties assumed that the process used and intended to be used was covered by the patent works both ways. It shows that they thought and meant that the agreement covered
51 and should cover the process actually used. We think that this

can be gathered from the agreement itself apart from the mere supposition of the parties.

"The contract dealt with a process known as the 'Harvey process.' It imported the speech of the parties and the common speech of the time into the description of the subject matter. The words Harvey process, commonly are put in quotation marks in the first contract, thus emphasizing the adoption of common speech. They mean the process actually used. The contract states that it is dealing with the same thing that had been the subject of the former agreement. That agreement further identified that subject as a process which was tested at the naval ordnance proving ground. It also identified it, it is true, as a patented process, but, if the incompatibility of the two marks is more than trivial, as it was regarded by the court which found the facts with which we have to deal, the identification by personal familiarity and by common speech is more pungent and immediate than that by reference to a document couched in technical terms, which the very argument for the United States declares not to have been understood. It is like a reference to monuments in a deed. As we have said, this identification by personal experiment and by common speech is carried forward into the contract in suit. The latter contract manifests on its face that it is dealing with a process actually in use, which requires the communication of practical knowledge and which further experience may improve."

Did the Midvale Steel Co. use the Harvey process; and if not, what process did it use? It is conceded that eliminating sand, the Harvey process was used. Sand was not mentioned in the patent as one of the essential elements, except as covered by the term "noncarbonaceous material," though it is true in illustrating the value of the Harvey process to the officers of the Government prior to the contract of April 12, 1893, sand was used; but, as the findings disclose, any other noncarbonaceous material would have accomplished the same result, though not essential, unless made so by the terms of the patent. That the same result was accomplished without sand by the Midvale Steel Co. is established in this case. Shall this technical variation defeat a recovery? We think not. Of course the defense of infringement or tort is not available to the United States, since by express contract it had the right to the use of the process on any of its vessels, by whomsoever manufactured; and even if we were to assume that the use of the process by the Midvale Steel Co. under any of its contracts with the Government was an infringement it would not avail the Government, since it received the benefit of the process on the vessel so manufactured, and under its contract of license is liable to the claimant company therefor, and that, too, with a right of action over against the Midvale Steel Co. for reimbursement. The Government having received the benefit of the process on its vessels under its license can not compel the claimant company to look to the Midvale Steel Co. for payment or other redress.

We can not consent that the abandonment of sand—which, as a matter of fact, is not material in the process of carbonizing the armor

plate—entitles the Midvale Steel Co. to the rights of the claimant as against the Government in the royalties, or any part thereof, when by express contract the Government had agreed to pay
53 the claimant company for the use of the process on all of its vessels by whomsoever manufactured, and by the terms of its contract had informed the Government of its method and process, and afterwards advised the Government, through the manufacturers of such armor plate, that sand might be discontinued, which was presumably known to the Midvale Steel Co.

As was said by the court in this case on the motion for a new trial (39 C. Cls., 297, 299), "In the opinion of the court the contract entitled the defendants to a disclosure of the inventor's process, to his instructions and assistance in the practical application of the patent, and to use the process, little or much, in whole or in part;" and, further, that as the defendants have received all they bargained for, they "are not entitled to set up their deviations, if any, from the specifications of the patent as a defense."

In view of the prior adjudications of the Supreme Court and of this court upon which we rest the right of recovery, as hereinbefore stated, we deem it unnecessary to pursue the case further, nor do we deem it necessary to review and discuss the authorities cited by counsel respecting the use and infringement of other patents, as the present case must stand or fall on the prior decisions of this and the Supreme Court, as we have said. The rendition of judgment, however, will be suspended until the extent of the amendment to the petition has been determined.

Order for entering judgment May 1, 1911.

The amended petition having been filed respecting the amount of armor plate treated and delivered, as shown by the returns from the Navy Department, and the handing down of this opinion having been withheld therefor, the court now orders that judgment be entered in the claimant's favor on the findings in the sum of $123,467.23.

The intervening petition as to the Midvale Steel Co. is dismissed.

53 VI. Claimant's Second Amended Petition. (Filed April 26, 1911.

To the Chief Justice and Judges of the Court of Claims:

I.

Your petitioner, Harvey Steel Company, respectfully presents its amended petition (No. 2), and represents that it is, and at all times since the year 1887 has been, a corporation created, organized and existing under the laws of the State of New Jersey.

II.

That on the 29th day of September, 1891, letters patent of the United States, bearing date on that day, and numbered 460,262, were

granted to the late Hayward A. Harvey, now deceased, formerly president of your petitioner, for a certain process for producing decrementally-hardened armor-plates, and for the decrementally-hardened armor-plates so produced, which process became
54 widely known, as practiced under the direction of your petitioner, and of the said Hayward A. Harvey, as the Harvey process for the treatment of armor-plates, or as the process of "Harveying" or "Harveyizing" or "Harvey treating" armor-plates, and such armor-plates as "Harveyed" or "Harveyized" armor-plates.

III.

That by a written agreement had, upon good and valuable consideration, under date of October 7, 1891, the said letters patent were assigned to and became vested in your petitioner, who then, and at all times thereafter has continued to be, and now is, the owner of all patented rights in and to said process for armor plates and all rights otherwise acquired for practicing, using, or producing the same.

IV.

That in 1890 your petitioner exhibited to the Chief of the Bureau of Ordnance of the Navy Department of the United States, an armor plate, and informed him that Mr. Hayward A. Harvey had discovered a process for hardening such plates which would produce plates of a combined hardness and toughness which had not yet been attained by manufacturers. To test this invention the Chief of Ordnance procured two plates from well known manufacturers—the Linden Steel Company—hardened by known existing methods. One of these was given to your petitioner to harden by the Harvey process. The other was retained by the Ordance Bureau. Both were subjected ultimately to the same test. The Chief of Ordnance officially reported this test to the Secretary of the Navy as follows:

"One plate, about 2½ feet square and 6 inches thick, was
55 carbonized, in a gradually decreasing amount, to a depth of 3 inches, and subjected to a comparative ballistic test by the attack of a 6-pounder Hotchkiss projectile, with a similar plate untreated. The resulting penetration in the untreated plate was about 3 inches. In the carbonized plate it was nil, the projectile being completely shattered.

"In view of these results, which were reproduced and corroborated by further experiments, the bureau has ordered an untreated armor plate 8 feet by 6 feet by 10½ inches, and proposes to have erected at the Washington Navy Yard the necessary plant for treatment by the Harvey process. It will then be subjected to a ballistic attack with the 6-inch gun, and a comparsive study made with the effects upon the foreign plates recently tested at Annapolis.

"The object of the experiments, as will be apparent, is the development of an armor plate which shall possess a superficial hardness and the toughness inherent in all steel, or one of its alloys."

V.

That in February, 1891, the said Chief of Ordnance of the Navy Department of the United States, to further test the Harvey process, procured two armor plates from a foreign manufacturer—Schneider & Co.—known as Creusot plates. One of these in like manner was retained by the Ordnance Bureau, and one your petitioner hardened; both were subjected to the same test. The Chief of Ordnance officially reported the results of this test to the Secretary of the Navy as follows:

"In February last took place the test of the Creusot 10¼ inch steel plate, which had been treated by the Harvey process at the Washington Navy Yard. The plate was attacked by seven 8-inch armor-piercing shells, three Holzer and four Carpenter, fired from a 8-inch gun of 35 calibre, the striking velocity being 2,065 foot-seconds.

56 The greatest penetration was 4 inches, except in one round, that at the center of the plate, where the point of the shell reached the backing. All the projectiles were broken up. The plate was cracked, but until the last round none were detached from the backing; at this round about one-eighth of the plate fell to the ground. These results are remarkable and indicated to the Department a probability that in this treatment has been found the means of producing the ideal armor plate—a hard front combined with a tough back, without any weld or other line of demarcation between the two."

VI.

That following these tests, on the 3rd day of March, 1891, at the request of the Government of the United States, represented by the Secretary of the Navy, an option was given by your petitioner to the said Government for the purpose of the application of the Harvey process for treatment of armor plates, which option is recited and set forth in the contract of March 21st, 1892, set forth in the following paragraph.

VII.

That on the 3rd day of March, 1891, the said Government of the United States, represented by the Secretary of the Navy, accepted the offer of your petitioner, and agreed to comply with the terms thereof; and on the 21st day of March, 1892, the following contract was entered into by and between your petitioner and the said Government of the United States, represented by the Secretary of the Navy:

"Memorandum of an agreement of two parts, made and entered into this twenty-first day of March, A. D. 1892, by and between the Harvey Steel Company, a corporation created under the laws of the

57 State of New Jersey, and doing business in said State, represented by the president of said corporation, of the one part (hereinafter called the party of the first part), and the United States, represented by the Secretary of the Navy, of the other part (hereinafter called the party of the second part).

"Whereas the party of the first part is the owner of all and singular the patented rights in and to a certain process, known as the 'Harvey process,' for the treatment of armor plate for use in the construction of vessels; and

"Whereas the parties have agreed and do hereby agree, that, upon the terms hereinafter stated, armor plate manufactured or treated under the said 'Harvey process' shall, so far as possible, be supplied to such of the following-described naval vessels as the department may from time to time designate, to wit:

Cruiser No. 6, "Amphitrite."
Cruiser No. 7, "Monadnock."
Cruiser No. 8, "Terror."
Cruiser No. 9, "Texas."
Cruiser No. 10, "Maine."
Cruiser No. 11, "Monterey."
Cruiser No. 12, "New York."
Cruiser No. 13, "Indiana."
Gunboat No. 5, "Massachusetts."
Gunboat No. 6, "Oregon."
"Puritan," ram.

"Whereas the said Harvey Steel Company, under date of March 3, 1891, in a communication signed by B. G. Clark, president; H. A. Harvey, general manager; and Theodore Sturges, treasurer, agreed to give the Navy Department the option of purchasing the right to use and employ the 'Harvey process' for treating armor plates, as follows:

"We hereby agree to give to the Naval Department an option for the purchase of the application of the Harvey process for treating armor plates, which was tested at the Naval Ordnance Proving Ground, Annapolis, Md., February 14, 1891, on the following terms, viz:

"In the event of the process proving of value, after further tests, and upon the demand of the Naval Department for its application to armor plating, the sum of $75,000 is to be paid by the latter to the Harvey Steel Company as royalty therefor, and as utilized, at the rate of one-half (½) of one (1) cent per pound of the weight of the finished plate. This royalty of one-half (½) of one (1) cent per pound is to cease when the said sum of $75,000 has been paid.

"The Navy Department is to have the right to use the process, should it so desire without further compensation, upon all armor plating which is to be applied to vessels, the construction of which is authorized by Congress, at this date. In the event of the authorization by Congress of the construction of other vessels of war than those above mentioned, a new contract, for the further application of the Harvey process of treating armor plates, is to be made between the Naval Department and the latter should the department so desire.

"It is understood that the Naval Department will undertake to bear all the expense of the experimental development of the process as applied to armor plates, our Mr. Harvey to furnish, in consulta-

tion with the Bureau of Ordnance, all details at present in his possession in regard to the process, or which he may personally develop, in the perfection of his methods of treatment as applied to armor plating.

"Whereas the Navy Department, under date of March 3, 1891, in a communication signed by Wm. M. Fogler, Chief of the Bureau of Ordnance, accepted the terms of the offer of the Harvey Steel Company, as stated in the communication above mentioned, and by this agreement does accept the option offered by the party of the first part in the first paragraph of said communication; and

"Whereas the party of the second part has agreed and does hereby agree to also pay, as hereinafter set forth, the expense of applying said process in the manufacture or treatment of said armor-plate:

"Now, therefore, it is mutually understood, covenanted, and agreed by and between the parties hereto that the party of the second part, upon the trems herein stated, may use and employ, in the treatment of armor plate manufactured or to be manufactured for naval vessels, as hereinbefore stated, the hereinbefore mentioned process known as the 'Harvey process.'

"The party of the first part, in consideration of the premises, and provided the said process of treating said armor plate shall be conducted at the Bethlehem Iron Works, at South Bethlehem, Pennsylvania, or elsewhere, under the direction of the party of the first part, hereby guarantees that, in addition to the hereinbefore mentioned royalty of one-half of one cent per pound, to be paid by the party of the second part to the party of the first part, upon armor for vessels which have been authorized by Congress up to March 3, 1891, the additional cost to the party of the second part of applying the Harvey process, hereinbefore referred to, to armor plate, as aforesaid, shall, during the period of one year from the date hereof, be nine-tenths of one cent ($0.009) per pound of the finished plate, and that after the expiration of the period of one year from the date hereof the said additional cost to the party of the second part shall not exceed nine-tenths of one cent per pound of the finished plate, and in case it shall be found that the actual cost of the application of said process to the armor plate shall have been diminished during one year from the date hereof, then the said additional cost to the party of the second part shall thereafter be equal to the said actual cost of the application of such treatment to the armor plate plus one-half (½) the difference between said actual cost of application and the sum of nine-tenths of one cent ($0.009) per pound of the finished plate.

"The party of the first part hereby further covenants and agrees that it will hold and save harmless, and, at its own expense, defend the United States from and against all and every demand or demands for or on account of the use and employment of the 'Harvey process,' above mentioned, in the manufacture or treatment of armor; and from all and every demand or demands which shall hereafter be made for the payment of any sum or sums of money in excess of the aforesaid cost for royalty and treatment of armor under said

process, to be paid as hereinbefore specified and provided for in this contract.

"Finally, it is hereby mutually understood, covenanted, and agreed by and between the parties hereto that the party of the second part shall render to the party of the first part quarterly reports of all armor plate manufactured or treated under the said Harvey process, which the party of the second part shall have received during the three months next preceding the dates of such reports, respectively, and within a period of thirty days after the rendition of each of said quarterly reports the party of the second part shall pay to the party of the first part such sum of money as may be required to cover the said royalty of one-half of one cent per pound, and also the cost of treatment by said Harvey process of the armor plate which shall have been received by the party of the second part during the three months next preceding the commencement of said period of thirty days; it being hereby understood and agreed that the first of the said quarterly reports shall be rendered on or before the first day of May, 1892, and shall be thereafter rendered every three months until all the armor treated for vessels authorized by Congress to March 3, 1891, shall have been received by the party of the second part.

"In witness whereof the respective parties hereto have hereunto set their hands and seals the day and year first above written.

"THE HARVEY STEEL COMPANY,
"By G. B. CLARK, *Pres.*
"THE UNITED STATES,
[SEAL.] "By B. F. TRACY,
"*As Secretary of the Navy.*

"Signed and sealed in the presence of—

"Attest:
[SEAL.] "L. L. STURGES, *Secty. pro tem.*
"WM. B. REMEY, *Judge Advocate General.*
"(As to B. F. Tracy, Secretary of the Navy.)"

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VIII.

That thereafter additional trial armor plates were subjected to numerous experimental tests by your petitioner and by the officers and agents of the United States, and on the 8th day of October, 1892, your petitioner was notified that the said process was definitely and formally adopted by the Navy Department by the following letter:

"DEPARTMENT OF THE NAVY,
"BUREAU OF ORDNANCE,
"*Washington, D. C., October 8, 1892.*

"THE HARVEY STEEL CO.,
"*Newark, N. J.*

"SIRS: Your letter of the 29th ultimo, addressed to the honorable Secretary of the Navy, has been referred to this bureau, which has cognizance of the matter.

"You are informed that the process for armor plate has been definitely adopted by the Navy Department.

"Respectfully,

"WM. M. FOLGER, *Chief of Bureau.*"

IX.

That acting under the requirement of said contract of March 21, 1892, by which your petitioner agreed that its Mr. Hayward A. Harvey should furnish the United States all details then in his possession in regard to the process, or that he might develop in the perfection of his method of treatment, the said United States, on February 18, 1893, and on March 14, 1893, required your petitioner and the said Hayward A. Harvey to furnish and reveal to the Navy Department its secret process and improvements, and thereupon your petitioner did so furnish and reveal the same.

62 X.

That on the 30th day of March, 1893, certain contract questions being then under discussion between the Navy Department of the United States and your petitioner, the United States, by its Secretary of the Navy, proposed a settlement between the United States and your petitioner, which proposal was in the following words:

"BUREAU OF ORDNANCE,

"NAVY DEPARTMENT,

"*Washington City, March 30, 1893.*

"THE HARVEY STEEL COMPANY,

"*Newark, N. J.*

"SIRS: I am directed by the Secretary of the Navy to propose the following settlement of the contract question at present under discussion between the Navy Department and the Harvey Steel Company, viz:

"The contract of March 31st, 1892, between the Navy Department and the Harvey Steel Company to be annulled, the price to be paid for the cost of the treatment of armor plates by the Harvey process having been arranged for by contracts with the Bethlehem Iron Company and the Carnegie Steel Company.

"A new contract to be made between the Secretary of the Navy and the Harvey Steel Company, by which the department agrees:

"1. To pay at once the sum of $96,056.46, this sum being the total royalty at the rate of ¼c. per pound upon 8,576.47 tons of armor, the amount of armor which the department proposes to harveyize intended for vessels, the construction of which was authorized by Congress prior to March 21st, 1892, and for which the contract of that date was made.

"Also for the armor of the 'Iowa' and 'Brooklyn' authorized since that date, and for which no contract exists.

"2. To pay a royalty of ¼c. per pound on all future contracts for armor to be treated by the Harvey process.

63 "3. The Harvey Steel Company to furnish all information regarding the composition of the compound employed in the Harvey process, and all information regarding its application in possession of the company. Also any improvements which the Harvey Steel Company may make at any future time.

"Respectfully,

"W. T. SAMPSON,
"*Chief of Bu. Ordnance.*"

XI.

That on the 12th day of April, 1893, the United States, represented by the Secretary of the Navy, entered upon a new contract with your petitioner, in and by which it agreed to pay to your petitioner the sum of $96,056.46 (it being understood, however, that 10 per cent. of the said sum should be withheld by the United States until, upon the receipt of the formulæ for the compounds used and employed in the application of the Harvey process, said process should be used and found efficient, and in the judgment of the Secretary of the Navy of satisfactory value), and should have the right to employ the said process on all vessels of war, which might, after July 19, 1892, be authorized by Congress upon the payment of royalty of one-half of 1 cent per pound for the finished plate; and said United States, on or about the 12th day of April, 1893, paid to your petitioner the said sum of $96,056.46, less the 10 per cent. reserved therefrom. This contract was in the terms following:

"Memorandum of agreement, of two parts, made and entered into this 12th day of April, A. D. 1893, by and between the Harvey Steel Company, a corporation created under laws of the State of New Jersey, and doing business in said State, represented by the president of said corporation, of the one part (hereinafter called
64 the party of the first part), and the United States, represented by the Secretary of the Navy, of the other part (hereinafter called the party of the second part).

"Whereas the party of the first part is the owner of all and singular the patented rights in and to a certain process, known as the Harvey process, for the treatment of armor-plates for use in the construction of vessels, and of the exclusive right to the use and employment of armor-plates manufactured according to said process, as particularly set forth in letters patent of the United States, No. 460262, issued September 29, 1891, to Hayward A. Harvey, of Orange, New Jersey, for certain improvements in decrementally-hardened armor-plates and in the art of manufacturing the same; and

"Whereas an agreement was made and entered into, under date of March 21, 1892, by and between the aforesaid parties hereto, whereby the party of the first part granted to the party of the second part the right to use and employ the Harvey process aforesaid in the manufacture of armor-plates for certain vessels of the Navy therein named for the sum of $75,000, to be paid by the party of the second

part to the party of the first part as royalty therefor, and as utilized, at the rate of one-half of one cent per pound of the finished plate, the party of the first part guaranteeing that the cost to the party of the second part, of the application of said process to armor-plates, shall not exceed nine-tenths of one cent per pound of the finished plate, provided the application of such process should be made under the direction of the party of the first part; and

"Whereas the party of the second part has entered into an agreement with the Bethlehem Iron Company, of South Bethlehem, Pennsylvania, for the treatment, according to said Harvey process, of armor plates for certain of the vessels mentioned in the aforesaid agreement, at a price in excess of the limit guaranteed by the party of the first part hereto, as aforesaid, the application of such process not to be made under the direction of said party of the first part.

"Now, therefore, the aforesaid agreement of March 21, 1892, 65 is hereby cancelled and annulled, and it is hereby mutually understood, covenanted, and agreed by and between the parties hereto, that for and in consideration of the premises and in consideration of the sum of ninety-six thousand and fifty-six dollars and forty-six cents ($96,056.46) to be paid by the party of the second part to the party of the first part as royalty, the party of the second part may, upon the terms hereinafter stated, use and employ in the treatment of armor plates manufactured or to be manufactured for all naval vessels, the construction of which was authorized by Congress up to and including July 19, 1892, the aforesaid Harvey process, and may use and employ the armor plates for said vessels manufactured according to said process, it being understood, however, that ten per cent. of said sum shall be withheld by the party of the second part until, upon the receipt of the formulæ for the compounds used and employed in the application of the Harvey process, said process shall have been tried and found to be efficient, and, in the judgment of the Secretary of the Navy, of satisfactory value.

"The party of the first part hereby further covenants and agrees that it will hold and save harmless, and at its own risk and expense defend the United States, from and against all and every demand or demands for the payment of any sum or sums of money in excess of the aforesaid sum of $96,056.46 as royalty for or on account of the use and employment of said process in the treatment of armor plates under this agreement, or of the armor plates manufactured in accordance therewith, and from and against all and every demand or demands for or on account of any infringement or alleged infringement of patented rights appertaining to said process or plates.

It is hereby mutually understood, covenanted, and agreed by and between the parties hereto that the party of the second part shall have the right to use and employ the aforesaid Harvey process in the treatment of armor plates for vessels which have been since July 18, 1892, or which may hereafter be authorized by Congress, and to use and employ armor plates for such vessels manufactured ac-

66 cording to said process, paying therefor to the party of the first part a royalty of one-half of one cent per pound of the finished plate.

"It is hereby further mutually understood, covenanted, and agreed by and between the parties hereto that the party of the first part shall furnish full and complete information regarding the composition of the compounds employed in the Harvey process, and the application of the same, and shall impart to the party of the second part all information concerning any and all improvements which said party of the first part may, at any time in the future, make in or upon said process as covered by the aforesaid letters patent, and that the party of the second part shall have the right to adopt and use and employ any or all of such improvements in said process, and to use the armor plates manufactured in accordance therewith under the terms of this agreement, without the payment of any compensation or royalty therefor to the party of the first part, in addition to that to be paid as hereinbefore stipulated.

"It is hereby further mutually understood, covenanted, and agreed by and between the parties hereto, that this agreement shall not, nor shall any interest herein, be transferred by the party of the first part to any other person or persons, and that no member of, or delegate to Congress, officer of the Navy, nor any person holding any office or appointment under the Navy Department, shall be admitted to any share or part of this agreement or to any benefit to arise therefrom; but this stipulation, so far as it relates to members of or delegates to Congress, shall not be considered to extend to this agreement, it being made with an incorporated company.

"It is hereby further mutually understood, covenanted, and agreed by and between the parties hereto, that if, at any time, the party of the first part shall fail to comply with and fulfill the terms, conditions, and requirements of this agreement on its part, the party of the second part may demand and recover from the party of the first part, on account of such failure, and as liquidated damages, a sum
67 of money equal to the penalty of the bond accompanying this agreement, and that in case it should at any time be judicially decided that the party of the first part is not legally entitled, under the letters patent aforesaid, to own and control the exclusive right to the use and employment of said process and the decrementally hardened armor plate produced thereunder, as set forth in the letters patent aforesaid, then the payment or royalty under the terms of this agreement shall cease, and all sums of money due the party of the first part from the party of the second part, as royalty for the use and employment of said process, and armor plates, as aforesaid, shall become the property of the party of the second part.

"The party of the second part, in consideration of the premises, hereby covenants and agrees that all warrants for payments to be made in accordance with the terms of this agreement shall be made payable to the party of the first part or its order.

"In witness whereof, the respective parties hereto have hereunto set their hands and seals the day and year first above written.

"HARVEY STEEL CO'Y,
"By H. A. HARVEY, *President.* [SEAL.]

"Attest:

"WM. ALLEN SMITH, *Sec'y.*

"Signed, sealed, and delivered in the presence of—

[SEAL.]

"THE UNITED STATES,
"By HILARY A. HERBERT,
"*As Secretary of the Navy.*
"SAM. C. LEMLY,
"*Judge Advocate General.*
"(As to Hilary A. Herbert, Secretary of the Navy.)"

XII.

That afterwards and on or about December 7, 1893, the officers of the United States being satisfied that your petitioner had
68 complied with the said contract of April 12, 1893, and demonstrated the value and efficiency of the process, the 10 per cent withheld by the United States under said contract of April 12, 1893, was paid over to your petitioner.

XIII.

That thereafter the Congress of the United States, by an act approved on or about March 2, 1895, authorized the construction of two battleships for the United States Navy, which were known respectively as No. 5 and No. 6, and subsequently named the "Kearsarge" and "Kentucky," and on or about the 15th day of April, 1896, the United States, by the Secretary of the Navy, issued and had advertised on that day inviting proposals for the supply of nickel-steel armor plates for the said two battleships, to the amount of about 6,000 tons, the said advertisements requiring of the bidders that the said armor plates should be "treated by a process of supercarburization known as the 'Harvey' process," and the said advertisement further stating to the bidders as follows:

"Bids are hereby invited for supplying the following-named material: About 6,000 tons, more or less, of nickel-steel armor, to be of the best material and domestic manufacture, part of which, as shown by the specifications, will be required to be treated by a process of supercarburization known as the Harvey process.

"The prices bid for armor treated by the 'Harvey' process must not include anything for royalties, as the department has acquired the right to use said process and will indemnify the contractors against all claims therefor."

XIV.

That the Bethlehem Iron Company and the Carnegie Steel
69 Company, Limited, having made bids in accordance with said specifications and advertisements, the United States, on or about the first day of June, 1896, by its Secretary of the Navy, entered into two separate contracts with said companies, respectively, in which they agreed to furnish in certain proportions the armor described in said advertisements and circulars including the "Harveyed" armor; and in compliance therewith, proceeded to manufacture and treat the armor plates, and supplied and delivered the same in due course to the United States. These plates were manufactured under the inspection and supervision of officers and agents of the Ordnance Bureau of the Navy Department of the United States, and were accepted and paid for by the bureau as having been treated by the Harvey process.

XV.

That the weight of finished plates of said armor so treated and supplied to the United States by the said Bethlehem Iron Company and the said Carnegie Steel Company, Limited, for the said battleships "Kearsarge" and "Kentucky," at the rate of royalty of one-half (½) of one (1) cent per pound for the finished plate amounted to a large sum, to wit, the sum of sixty thousand eight hundred and six dollars and forty-five cents ($60,806.45); and that the said sum became wholly due and remained unpaid.

XVI.

That your petitioner repeatedly applied to the Secretary of the Navy of the United States for an accounting of the royalties for said "Harveyed" armor so treated and supplied under said contract and for payment thereon, as provided for by said contract
70 dated April 12, 1893, but the said Secretary of the Navy wholly refused to pay said sum or any part thereof, although repeatedly requested so to do.

XVII.

That thereafter and on or about June 22, 1898, the Secretary of the Navy of the United States transmitted to this court, in accordance with the provisions of sec. 1063 of the Revised Statutes of the United States, certain papers relating to the said claim of your petitioner, in order that the said claim might receive trial and adjudication by the court, as provided for by the said statute. Proceedings were thereupon had before this court in suit No. 21110, on the claim of your petitioner above set forth, in accordance with sec. 1064 of the Revised Statutes of the United States, and with the laws of the

United States and the rules and regulations of this court in such case made and provided, and said case having been heard by this court, this court, upon the evidence, made certain findings of fact, and upon these findings of fact the court decided as a matter of law that your petitioner was entitled to receive the amount of royalty set forth in said claim and petition, to wit, the sum of sixty thousand eight hundred and six dollars and forty-five cents ($60,806.45).

XVIII.

That after said decision and on or about October 24, 1903, the United States, by L. A. Pradt, its Assistant Attorney General, brought before this court a motion for a new trial, alleging certain errors of law and fact in said decision, and on February 24, 1904, the court overruled the said motion for a new trial and amended its findings of fact.

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XIX.

That a final decree was thereupon made and entered in this court in favor of the petitioner and against the United States for the said sum of $60,806.45 for royalty for the use of said Harvey process and manufacture of armor plates.

XX.

That the United States took an appeal from said decree and judgment in favor of your petitioner to the Supreme Court of the United States, and the said appeal having been heard by the said Supreme Court on a transcript of the pleadings, proceedings, the findings of facts and conclusions of law, the opinions of this court and its said decree and judgment, the said Supreme Court, on or about January 16, 1905, affirmed in all respects the said decree and judgment of this court, which judgment was subsequently paid to your petitioner by the United States; that by the proceedings above set forth, between the Government of the United States and your petitioner, and by the said final decree and judgment, the said United States, its agents and officers are now estopped to deny or contest before this court, as against your petitioner, any of the questions therein litigated and determined.

XXI.

That by contracts made and entered into on June 3, 1898, and August 30, 1899, respectively, by and between the United States and the Carnegie Steel Company, Limited, a limited partnership, of the State of Pennsylvania, and by contracts made and entered into on November 26, 1900, February 28, 1903, and January 9, 1904, respec-

tively, by and between the United States and the Carnegie
72 Steel Company, a Pennsylvania corporation, and by a contract made and entered into on the 9th day of June, 1898, by and between the United States and the Bethlehem Iron Company, a Pennsylvania corporation, and by contracts made and entered into on October 4, 1899, November 28, 1900, February 28, 1903, and December 31, 1903, respectively, by and between the United States and the Bethlehem Steel Company, a Pennsylvania corporation, said companies respectively agreed to and did manufacture and deliver to the United States certain face-hardened armor plates, which said plates were made and treated by the said companies respectively by the said Harvey process.

XXII.

That the weight of the finished armor plates, so made and treated by the said Bethlehem Iron Company, Bethlehem Steel Company, Carnegie Steel Company, Limited, and the Carnegie Steel Company, and furnished by them to and accepted by the United States from June 3, 1898, to September 30, 1905, under said several contracts referred to in the last preceding paragraph, amounted to 58,047.515867 tons, equivalent to the 130,026,435 pounds, and that the royalties, at the rate of one-half of one cent per pound, or $11.20 per ton for the said finished plate, which was due your petitioner under the said contract of April 12, 1893, with the United States, amounted to the sum of six hundred and fifty thousand one hundred and thirty-two dollars and seventeen cents ($650,132.17); and that said sum became wholly due and remained unpaid.

73 XXIII.

That your petitioner applied to the Secretary of the Navy of the United States for an accounting of the royalties for the said "Harveyed" armor, so treated, supplied and accepted under the said contracts referred to in Paragraphs XXI and XXII hereof, and for the payment thereof, as provided by the said contract dated April 12, 1893, but the said Secretary of the Navy refused to pay said sum or any part thereof.

XXIV.

That your petitioner commenced a suit in this court, No. 25,267, in accordance with the provisions of the Revised Statutes of the United States and the rules and regulations of this court, against the United States, by filing a petition herein on or about May 28, 1904, and an amendment thereto on or about November 9, 1905, to recover from the United States, under your petitioner's said contract of April 12, 1893, the aforesaid royalties, amounting to the said sum of six hundred and fifty thousand, one hundred and thirty-two dollars and seventeen

cents ($650,132.17), due to your petitioner under the said contract on the said finished armor supplied to the United States and accepted by it, as alleged in Paragraphs XXI and XXII hereof. That after some proceedings were had in said suit the issues raised therein were presented to the Secretary of the Navy, who, upon consideration thereof, announced that the judgment of this court in the aforesaid suit No. 21,110, of your petitioner against the United States, as affirmed by the Supreme Court of the United States, was, in his opinion, controlling upon the United States as to all the issues
74 raised therein; that the issues raised in the said suit No. 25,267 were substantially the same as those raised in the said suit No. 21,110, and that as they had been judicially determined in favor of your petitioner, and against the United States, under the said contract of April 12, 1893, the royalties, amounting to the sum of six hundred and fifty thousand, one hundred and thirty-two dollars and seventeen cents ($650,132.17), due to your petitioner as aforesaid, should be paid. That thereafter certain proceedings were duly had in the said suit, and the case having been heard by this court, the court, on or about November 16, 1905, upon the evidence, made certain findings of fact, and upon these findings of fact, this court decided, as a matter of law, that your petitioner was entitled to recover judgment for the amount of said royalties set forth in said petition and amendment thereto, to wit: the said sum of six hundred and fifty thousand one hundred and thirty-two dollars and seventeen cents ($650,132.17). That on the same day a final judgment was entered in this court in favor of your petitioner and against the United States for the said sum of six hundred and fifty thousand one hundred and thirty-two dollars and seventeen cents ($650,132.17), which was subsequently paid to your petitioner by the United States, and that by the proceedings in said last mentioned suit, No. 25,267, and by the said final judgment, the said United States and its agents and officers are now estopped to deny or contest before this court, as against your petitioner, any of the questions therein litigated and determined.

XXV.

That the proceedings and judgments of this court in the said
75 suit numbered 21,110 and 25,267 will more fully and at large appear by reference to the records of this court, and which proceedings and judgments your petitioner prays may be deemed and taken as part of this petition.

XXVI.

That the due and unpaid claims hereinafter set forth of your petitioner against the United States are founded upon the said contract dated April 12, 1893, between your petitioner and the United States and present substantially the same questions which have been judicially determined by this court and the United States Supreme Court in the aforesaid suits of your petitioner against the United States.

XXVII.

That on December 15, 1903, the Government of the United States, acting by its Secretary of the Navy, and The Midvale Steel Company, a corporation organized and existing under the laws of the State of Pennsylvania, made and entered into a contract by which the said The Midvale Steel Company agreed to manufacture and deliver to the Navy Department of the United States certain armor plates according to the conditions stated in an advertisement and circular of the Secretary of the Navy dated August 3, 1903, proposals of The Midvale Steel Company under said advertisement, and a printed circular and specifications concerning armor plate and appurtenances for vessels of the United States Navy, approved by the Secretary of the Navy November 30, 1903.

76

XXVIII.

That under said contract of December 15, 1903, the said Midvale Company used and employed the Harvey process aforesaid in the treatment of armor plates, and did, up to September 28, 1908, manufacture and deliver to the Navy Department of the United States finished armor plates in accordance with the aforesaid Harvey process, and which have been accepted and paid for by the said Navy Department (and which were in fact made and treated in substantially the same manner as those heretofore recited as made for the said Navy Department, and upon which this court finally adjudicated and decreed that the petitioner was entitled to recover royalty from the defendant) to at least the amount of five thousand one hundred and ninety and ten hundredths (5,190.10) tons, or eleven million six hundred and twenty-five thousand eight hundred and twenty-four (11,625,824) pounds, for which royalties at the rate of one-half of one cent per pound, or $11.20 per ton, are due your petitioner under its contract of April 12, 1893, with the United States, to the sum of at least fifty-eight thousand one hundred and twenty-nine dollars and twelve cents ($58,129.12).

XXIX.

That on April 5, 1905, the Government of the United States, acting by its Secretary of the Navy, and the said Midvale Company, made and entered into a contract by which the said Midvale Company agreed to manufacture and deliver to the Navy Department of the United States certain armor plates according to the conditions stated in an advertisement and circular of the Secretary of
77 the Navy dated on or about December 8, 1904, proposals dated on or about January 11, 1905, of the said Midvale Company under said advertisement, and a printed circular and specifications concerning armor plate and appurtenances for vessels of the United States Navy, approved by the Secretary of the Navy Department December 29, 1904.

XXX.

That under said contract of April 5, 1905, the said Midvale Company used and employed the Harvey process aforesaid in the treatment of armor plates, and did, up to September 28, 1908, manufacture and deliver to the Navy Department of the United States finished armor plates in accordance with the aforesaid Harvey process, and which have been accepted and paid for by the said Navy Department (and which were in fact made and treated in substantially the same manner as those heretofore recited as made for the said Navy Department and upon which this court finally adjudicated and decreed that the petitioner was entitled to recover royalty from the defendant, to at least the amount of eight hundred and seventy-one and five hundredths (871.05) tons, or one million nine hundred and fifty-one thousand one hundred and fifty-two (1,951,152) pounds, for which royalties at the rate of one-half of one cent per pound, or $11.20 per ton, are due your petitioner under its contract of April 12, 1893, with the United States, to the sum of at least nine thousand seven hundred and fifty-five dollars and seventy-six cents ($9,755.76).

XXXI.

That on August 6, 1906, the Government of the United
78 States, acting by its Secretary of the Navy and the said Midvale Company, made and entered into a contract by which the said Midvale Company agreed to manufacture and deliver to the Navy Department of the United States certain armor plates according to the conditions stated in an advertisement and circular of the Secretary of the Navy dated March 21, 1906, proposals dated on or about July 10, 1906, of the said Midvale Company under said advertisement, and a printed circular and specifications concerning armor plate and appurtenances for vessels of the United States Navy, approved by the Secretary of the Navy.

XXXII.

That under said contract of August 6, 1906, the said Midvale Company used and employed the Harvey process aforesaid in the treatment of armor plates, and did, up to and including September 24, 1908, manufacture and deliver to the Navy Department of the United States finished armor plates in accordance with the aforesaid Harvey process, and which have been accepted and paid for by the said Navy Department (and which were in fact made and treated in substantially the same manner as those heretofore recited as made for the said Navy Department, and upon which this court finally adjudicated and decreed that the petitioner was entitled to recover royalty from the defendant) to at least the amount of two thousand seven hundred and seventeen and forty-eight hundredths (2,717.48)

tons, or six million, eighty-seven thousand one hundred and fifty-five (6,087,155) pounds.

That in addition to the 2,717.48 tons of said armor plate, the said Midvale Company, prior to September 28, 1908, under said contract of August 6, 1906, did manufacture and deliver to the United States nine hundred and nine and ninety-nine hun-
70 dredths (909.99) tons of finished armor plates, which armor plates were treated as aforesaid in accordance with the said Harvey process, and which armor plates have been accepted and paid for by the said Navy Department, making a total of at least three thousand six hundred and twenty-seven and forty-seven hundredths (3,627.47) tons, or eight million one hundred and twenty-five thousand five hundred and thirty-two (8,125,532) pounds of finished armor plates manufactured and treated as aforesaid and delivered by the said Midvale Company up to September 28, 1908, and accepted and paid for by said Navy Department under said contract of August 6, 1906, for which royalties at the rate of one-half of one cent per pound, or $11.20 per ton, are due your petitioner under its contract of April 12, 1893, with the United States, to the sum of at least forty thousand six hundred and twenty-seven dollars and sixty cents ($40,627.66).

XXXIII.

That on August 29, 1907, the Government of the United States, acting by its Secretary of the Navy, and the said Midvale Company, made and entered into a contract by which the said Midvale Company agreed to manufacture and deliver to the Navy Department of the United States certain armor plates according to the conditions stated in an advertisement and circular of the Secretary of the Navy, proposals of the said Midvale Company under said advertisement, and a printed circular and specifications concerning armor plate and appurtenances for vessels of the United States Navy, approved by the Secretary of the Navy.

XXXIV.

80 That under said contract of August 29, 1907, the said Midvale Company used and employed the Harvey process aforesaid in the treatment of armor plates, and did, up to September 28, 1908, manufacture and deliver to the Navy Department of the United States finished armor plates in accordance with the aforesaid Harvey process, and which have been accepted and paid for by the said Navy Department (and which were in fact made and treated in substantially the same manner as those heretofore recited as made for the said Navy Department, and upon which this court finally adjudicated and decreed that the petitioner was entitled to recover royalty from the defendant) to at least the amount of two hundred and

seventy and forty-eight hundredths (270.48) tons, or six hundred and five thousand eight hundred and seventy-five (605,875) pounds.

That in addition to the 270.48 tons of said armor plate the said Midvale Company, under said contract of August 29, 1907, had in the course of carburization prior to September 28, 1908, armor plates amounting to one thousand and sixty-four and seventy-six hundredths (1,064.76) tons, which were subsequently finished and delivered by it to, and accepted and paid for by the said Navy Department; that the said Midvale Company, in carburizing and finishing said armor plates, used and employed the Harvey process as aforesaid, making a total of at least one thousand three hundred and thirty-five and twenty-four hundredths (1,335.24) tons, or two million nine hundred and ninety thousand nine hundred and thirty-eight (2,990,938) pounds of finished armor plates manufactured and treated, as aforesaid by the said Midvale Company, and delivered, accepted, and
81 paid for by the said Navy Department under said contract of August 29, 1907, for which royalties at the rate of one-half of one cent per pound, or $11.20 per ton, are due your petitioner under its contract of April 12, 1893, with the United States, to the sum of at least fourteen thousand nine hundred and fifty-four dollars and sixty-nine cents ($14,954.69).

XXXV.

That by said contracts made and entered into respectively on December 15, 1903, April 5, 1905, August 6, 1906, and August 29, 1907, by and between the said Midvale Company and the United States, the United States authorized the said company to use and employ the said Harvey process or a process satisfactory to and approved by the Navy Department of the United States, in the treatment of the armor plates manufactured under said contract; that the said company did in fact use and employ the said Harvey process in the treatment of the aforesaid armor plates in execution of said contracts; that said Harvey process by which the said company so manufactured and treated the said armor plates under the said contracts, and the said finished armor plates were satisfactory to and approved by the said Navy Department; that the total weight of said finished armor plates so manufactured, treated, and delivered by the said Midvale Company to, and accepted and paid for by the Navy Department, or the United States, under said contracts, has amounted to at least eleven thousand and twenty-three and eighty-six hundredths (11,023.86) tons, or twenty-four million six hundred and ninety-three thousand four hundred and forty-six (24,693,446) pounds, and that total royalties at the rate of one-half of one cent per
82 pound, or $11.20 per ton, for the said finished armor plates due your petitioner under its said contract of April 12, 1893, with the United States, have amounted to at least a total of one hundred and twenty-three thousand four hundred and sixty-seven dollars and

twenty-three cents ($123,467.23), and at least said sum is now wholly due and owing to your petitioner from the defendant, and no part of the same has been paid.

XXXVI.

Your petitioner has applied to the Secretary of the Navy of the United States for payment of the royalties for armor plates furnished by the said Midvale Company under its aforesaid contracts, as provided for by your petitioner's contract with the United States as aforesaid, dated April 12, 1893, but the said Secretary of the Navy has neglected and refused and still refuses to pay the same or any part thereof.

XXXVII.

It has never at any time been judicially decided that your petitioner is not legally entitled, under the letters patent No. 460,262 aforesaid, to own and control the exclusive right to the use and employment of the process aforesaid, and the decrementally hardened armor plates produced thereunder.

XXXVIII.

There is now due and owing from the said United States to your petitioner, under said agreement of April 12, 1893, as royalties for said armor plates manufactured, treated, finished, and delivered as aforesaid by the said Midvale Company to, and accepted and paid for by the United States, up to September 28, 1908, and also for armor plate which was in the course of carburization prior to that date, and subsequently finished and delivered as aforesaid by the said Midvale Steel Company to and accepted and paid for by the said Navy Department of the United States, the total sum of at least one hundred and twenty-three thousand four hundred and sixty-seven dollars and twenty-three cents ($123,467.23), no part of which has been paid.

Your petitioner therefore prays the court that judgment may be rendered in its favor for at least the sum of one hundred and twenty-three thousand four hundred and sixty-seven dollars and twenty-three cents ($123,467.23).

(Corporate seal.)

HARVEY STEEL COMPANY,
By S. S. PALMER, *Secretary.*

Attest:

GEO. W. BURLEIGH, *Secretary.*

BETTS, SHEFFIELD, BENTLEY & BETTS,
Attorneys for Petitioner.
JAMES R. SHEFFIELD,
Of Counsel.

84 UNITED STATES OF AMERICA,
Southern District of State & County of New York, ss:

Personally appeared before me, John J. Flynn, notary public, duly commissioned and appointed, S. S. Palmer, who, being duly sworn, deposes and says that he is the president of the petitioner named in the foregoing amended petition and that his genuine signature is thereunto subscribed; that no assignment or transfer of the claim therein mentioned, or any part thereof, or any interest therein, has been made, and that said claimant is justly entitled to at least the amount therein claimed from the United States after allowing all just credits and offsets, and that the deponent verily believes the facts as stated in said petition to be true.

S. S. PALMER.

Subscribed and sworn to before me, in the State, district, and county aforesaid, this 25th day of April, 1911.

(Notarial seal.) JOHN J. FLYNN,
Notary Public, New York County.

Petitioner's address: Jersey City, New Jersey.
Attorney's address: Betts, Sheffield, Bentley & Betts, 52 William Street, New York City.

85 VII. ORDER FOR ENTRY OF JUDGMENTS MAY 1, 1911.

At a Court of Claims held in the city of Washington on the first day of May, A. D. 1911, judgment was ordered to be entered as follows:

The court, on due consideration of the premises, find for the claimant, and do order, adjudge, and decree that the claimant, Harvey Steel Company, do have and recover of and from the United States the sum of one hundred and twenty-three thousand four hundred and sixty-seven dollars and twenty-three cents ($123,467.23). The court further order, adjudge, and decree that the intervening petition of The Midvale Steel Company be and the same is hereby dismissed.

BY THE COURT.

86 VIII.

Motions of the defendants and of the intervenor, respectively, to amend findings of fact and for a new trial were filed July 27, 1911.

IX. ARGUMENT OF SAID MOTIONS.

On the 31st day of October, 1911, the above motions came on to be heard. Mr. Ashford was heard in support of the defendants' motion for a new trial and to amend findings; Mr. Busser and Mr. Harding were heard in support of the motion of the intervening claimant,

The Midvale Steel Company, to amend the findings and for additional findings; Mr. Sheffield was heard in opposition to both motions, and the motions were submitted.

87 X. ORDER OF COURT ON SAID MOTIONS. (Filed November 13, 1911.

ORDER.

The motions of the defendants, the United States, and of the Midvale Steel Company, intervenor, for a new trial are overruled.

The motion of the defendants to amend findings, as also the motion of the intervenor, the Midvale Steel Company, to amend findings, is overruled.

Finding III and the conclusion of fact are amended, as shown by findings this day filed nunc pro tunc as of March 27, 1911.

The judgment of the court and opinion to stand.

BY THE COURT.

88 XI. APPLICATION OF DEFENDANTS FOR APPEAL AND ALLOWANCE OF SAME.

HARVEY STEEL COMPANY *vs.* THE UNITED STATES. } No. 29899.

From the judgment rendered in the above-entitled cause on the 13th day of November, 1911, in favor of the claimant, the defendants, by their Attorney General, on the 31st day of January, 1912, make application for, and give notice of, an appeal to the Supreme Court of the United States.

JOHN Q. THOMPSON,
Assistant Attorney General.
P. M. A.

Filed January 31, 1912.

Ordered: That the above appeal be allowed as prayed for.

BY THE COURT.

APRIL 1, 1912.

89 XII. APPLICATION OF INTERVENOR FOR APPEAL AND ALLOWANCE OF SAME.

In the Court of Claims of the United States. No. 29,899.

APPLICATION OF MIDVALE STEEL COMPANY FOR ALLOWANCE OF APPEAL.

From the judgment formulated and entered May 1, 1911, in the above-entitled cause and made final on the 13th day of November,

A. D. 1911, and from the whole thereof, the Midvale Steel Company, intervenor, by its attorney of record, Frederic D. McKenney, on this the 9th day of February, A. D. 1912, makes this its application for, and gives notice of an appeal to the Supreme Court of the United States.

MIDVALE STEEL COMPANY,
By FREDERIC D. MCKENNEY.

Filed February 9, 1912.

Ordered: That the above appeal be allowed as prayed for.

BY THE COURT.

APRIL 1, 1912.

COURT OF CLAIMS.

HARVEY STEEL COMPANY *vs.* THE UNITED STATES AND THE MIDVALE STEEL COMPANY.	No. 29899.

I, John Randolph, assistant clerk of the Court of Claims, hereby certify that the foregoing are true transcripts of the pleadings in the above-entitled cause; of the orders of the court; of the findings of fact and ultimate conclusion of fact, and of the conclusion of law filed by the court; of the opinion of the court; of the judgments of the court; of the application of the defendants and of the intervenor, for allowance of appeal to the Supreme Court of the United States and of the allowance of the same.

In testimony whereof I have hereunto set my hand and affixed the seal of said Court of Claims, at Washington City, this 16th day of April, 1912.

[SEAL.]

JOHN RANDOLPH,
Assistant Clerk Court of Claims.

(Indorsement on cover:) File No. 23,166. Court of Claims, Term No. 1,090. The United States, appellant, *vs.* Harvey Steel Company. File No. 23,167. Term No. 1,091. Midvale Steel Company, appellant, *vs.* Harvey Steel Company. Filed April 18th, 1912. File Nos. 23,166 and 23,167.

O

In the Supreme Court of the United States.

OCTOBER TERM, 1912.

THE UNITED STATES, APPELLANT, v. HARVEY STEEL COMPANY, APPELLEE.	No. 615.
THE MIDVALE STEEL COMPANY, APPELLANT, v. THE HARVEY STEEL COMPANY, APPELLEE.	No. 616.

APPEAL FROM THE COURT OF CLAIMS.

BRIEF FOR THE UNITED STATES IN OPPOSITION TO APPELLEE'S MOTION TO AFFIRM JUDGMENT.

The argument in support of the motion to affirm is based entirely upon the contention that the issue raised by the appeal is *res adjudicata*. It is urged that the decision of this court in the case between the same parties, decided January 16, 1905 (196 U. S. 310), "is the law of this case."

This proposition we dispute. Thus there is raised an issue which necessarily involves an exhaustive examination of the facts in the case at bar and the differentiation of those facts from the facts in the

case decided in the 196 U. S. (supra); besides there is dispute as to the principles of law applicable to the facts of this case even from our view of the facts. In short it is the contention of the Government that the facts in the case at bar are essentially different from the facts in the previous case referred to, and that, therefore, the construction of the contract in that case has no application to the issue of law growing out of the facts here. The mere statement of this issue furnishes sufficient grounds to warrant the court in overruling appellee's motion.

It will, therefore, be our purpose to go into this case only so far as may be necessary to show that the contention of the United States in the premises is worthy of a full and complete hearing upon the merits of the case.

In the contract of April 12, 1893, from which the Government's liability here must arise, if at all, it is recited that:

> Whereas the party of the first part (Harvey Steel Company) is the owner of all and singular the patented rights in and to a certain process known as the "Harvey process" for the treatment of armor plates for use in the construction of vessels, and of the exclusive right to the use and employment of armor plates manufactured according to said process *as particularly set forth in Letters Patent of the United States, No. 460,882, issued September 29, 1891*, to Hayward A. Harvey, of Orange, N. J., for certain improvements in decrementally hardened armor plates and in the art of manufacturing the same. * * *

The contract provides:

> The party of the second part (The United States) may upon the terms hereinafter stated use and employ in the treatment of armor plates manufactured or to be manufactured for all naval vessels, the construction of which was authorized by Congress up to and including July 19, 1892, *the aforesaid* "*Harvey process*," and may use and employ *the* armor plates for said vessels manufactured according to *said* process. * * *
>
> That the party of the second part shall have the right to use and employ the *aforesaid* "Harvey process" in the treatment of armor plates for vessels which have been *since* July 18, 1892, or which may *hereafter* be authorized by Congress, and to use and employ armor plates for such vessels manufactured according to *such* process, paying therefor to the party of the first part a royalty of one-half of one cent per pound of the finished plate. * * *

It is further provided that:

> The party of the first part shall furnish full and complete information regarding the composition of the compound employed in the Harvey process, and the application of the same, and shall impart to the party of the second part all information concerning any and all improvements which said party of the first part may, at any time in the future, *make in or upon said process as covered by the aforesaid letters patent.* * * * (Rec., pp. 8–10.)
>
> (Italics ours.)

It is submitted that the provisions of the contract above quoted leave no doubt as to the exact and precise process which the Government thereby obtained the right to the use of and for which it agreed to pay a royalty. It was the process described in Letters Patent No. 460262.

It is a proposition of law too well established to require the citation of authorities that a patent covers nothing but that which is stated in the claim of the patent.

Turning now to the patent itself, we find that it describes the process as follows:

> 1. The herein-described method of producing a decrementally hardened tenacious armor plate of noncarbonaceous material on one side and a mass of granular carbonaceous material firmly packed upon the other side contained in a compartment formed within the heating chamber of a suitable furnace and in maintaining the said heating chamber for a predetermined period of time at a temperature above the melting point of cast iron, and in subsequently chilling said plate, whereby a stratum of steel of prescribed thickness upon the side of the plate against which said carbonaceous material has been pressed is made to acquire a heterogeneous crystalline structure and a condition of excessive hardness upon its exposed surface and a condition of gradually diminishing hardness as the depth from said surface increases. (Rec., p. 25, Finding III.)

Separating the process thus described into its several parts, we find it contains the following steps:

First. The packing of the "low steel plate between a mass of noncarbonaceous material on one side and a mass of granular carbonaceous material firmly packed upon the other side."

Second. Inclosing the plates so packed "in a compartment formed within the heating chamber of a suitable furnace."

Third. "In maintaining the said heating chamber for a predetermined period of time at a temperature above the melting point of cast iron."

Fourth. "In subsequently chilling said plate."

Precisely these "steps" were used in the "exhibition of the process" prior to the contract of April 12, 1893. (Finding III, Rec., middle paragraphs, p. 26.)

The process used by the Midvale Steel Company differed from the process named in the contract on which the suit is predicated and particularly set forth in said Letters Patent No. 460262, and as exhibited to the United States prior to the time said contract was entered into, in the *essential* particular that the steel plate was not packed between a mass of noncarbonaceous material and a mass of granular carbonaceous material. (Finding III, p. 26; Finding XV, p. 33.) Therefore, the process used by the Midvale Steel Company was not the "Harvey process."

This proposition is a pure question of law, and it matters not that the Court of Claims has undertaken to say in the findings of fact and in the opinion that the process used by the Midvale Steel Company was "substantially" the Harvey process. That is nothing more than an expression of opinion on the

part of the court. It will be noticed that the court below, in its conclusion of fact, guards this expression of its opinion by saying in substance that so far as it is a *fact*, that the fact is the Midvale Steel Company used "substantially the Harvey process." (Rec., p. 35.) The court having found explicitly the process used by the Midvale Steel Company and the contract in suit defining definitely and unequivocally the process which the Government obtained the right to the use of, and for which it agreed to pay a royalty, it is not only unnecessary but improper on this motion to look further into the facts to determine whether or not the process actually used by the Midvale Steel Company was the Harvey process.

It is a fundamental principle of patent law that a process patent is not infringed where any one of the series of acts constituting the process is omitted, unless some equivalent act is substituted for the one omitted. Numerous authorities and cases can be cited to substantiate this statement of the law. It is not our purpose, however, to cite authorities at this time nor to enter into an extended discussion of the proposition stated.

As has already been pointed out, the facts in this case show clearly and conclusively that one part of one of the steps of the patented process sold to the United States was *not* used by the Midvale Steel Company in the manufacture of the armor plate in question. And it does not lie within the mouth of the Harvey Steel Company to say that that part

is unimportant and of no consequence, for it is likewise a well-established principle of law that the person claiming under the patented process can not be heard to say that any part of his patented process is not essential to that process, or that any step in the process is not essential thereto. Neither does it lie within the province of the Court of Claims to say, either in its findings of fact or its conclusions of law, that the noncarbonaceous material which was to be, under the express terms of the claim of the patent, packed against the back of the plate, was not essential to the process patented and exhibited to the United States prior to the contract of April 12, 1893. Mr. Harvey, the patentee, made no distinction between the carbonaceous and the noncarbonaceous material. In the eye of the law they are equal. One is just as necessary as the other to the integrity of the process. You can no more omit the *non*-carbonaceous material and have the "Harvey process" than you can omit the carbonaceous material and still have the "Harvey process."

The noncarbonaceous material actually used in the treatment of armor plate manufactured for the Government under contracts requiring the "Harvey process" to be used "consisted of sand packed at the back of the plate." The use of sand was gradually discontinued because, it is said, "the same result could be accomplished without it." (Finding III, Rec., p. 26.) Suppose it had been discovered that the "same result" could be obtained—that is, the production of decrementally face-hardened armor

plate standing a certain ballistic test—without the use of the carbonaceous material or some equivalent; or suppose it had been discovered that it was unnecessary to "chill" the plates after taking the same from the furnace; or suppose it had been discovered that it was unnecessary to "heat" the plates in a furnace at all, or to take any step as an equivalent for either chilling or heating; and suppose further that the armor plate involved in this case had been manufactured without the use of either or any one of said steps, or an equivalent therefor, would it then be claimed that the "Harvey process" had been used?

In this connection it is proper, we believe, to state that appellee has not claimed or demanded any royalty on the production of armor plate by the so-called "Harvey process" since the expiration of the letters patent designated in the contract. Inferentially, the reason for this abstention must be that appellee does not feel it is entitled to royalties under the contract of April, 1893, *the patent having expired*. It follows by the same token that during the life of the patent it was not entitled to royalties under said contract if the precise and identical process patented was not used.

It may all be true; indeed, for the purposes of this case, we must accept it as true, because it is part of the findings of fact that the "same result" could be accomplished without the use of noncarbonaceous material on the back of the plate as with it. But in this connection it should be borne in

mind that the United States did not agree in the contract of April 12, 1893, to pay the Harvey Steel Company a royalty for *results* obtained. The sole scope of that contract was to oblige the United States to pay a royalty for armor plate manufactured or treated by the process named in the contract—the Harvey process of the patent—when, as we claim, it *procured* the manufacture or treatment of the plates by that process; that is to say, when it required that process to be used.

It will be conceded, we believe, by the learned counsel for appellee that there is nothing in the contract of April 12, 1893, which precludes the United States from obtaining or securing armor plate, either on orders from manufacturers or in the open market, which would stand the ballistic test and meet the other specifications as to shape and size, produced by some process other than the "Harvey process." That is precisely what we claim to have secured in the transactions with the Midvale Steel Company.

It will no doubt be urged that the middle and last paragraphs of the third finding of fact (Rec., pp. 26, 27) are in effect a finding that an *equivalent* for the noncarbonaceous material was used in the form of the brick box described in the next to last paragraph of said finding. The court says the brick box prevented the carbonaceous material "from reaching the back and sides of the plates." It then goes on to express what we claim is simply a conclusion that the same result was accomplished by this brick box as was accomplished with the sand

(noncarbonaceous material), "which was used to protect the back of the plate from the carbonaceous material and excessive heat as *aforesaid*."

It will be observed that the court does not find the brick box protected the back of the plates from *excessive heat* as did the sand, but only that it protected it from the carbonaceous material. So that the brick box was not an equivalent for the sand or other noncarbonaceous material. The court is obviously wrong in stating that the brick box was designed to or had the effect of protecting the back of the plate from the carbonaceous material. The carbonaceous material was on one side of the plate. The purpose in placing it there was to decrementally harden that side of the plate. That is to say, it would be hardest at the surface and would decrease in hardness as it entered the plate. The *back* of the plate was therefore thoroughly protected from the carbonaceous material by the very fact that said material was placed on the *face* of the plate; it needed no other protection.

The brick box alluded to is nothing more or less than the compartment within which the plate or plates were placed and may be said to correspond with that which is described in the claim of the Harvey patent as "a compartment *formed* within the heating chamber of a suitable furnace." Much the same kind of a compartment was used in the process of treating armor plate by the "Harvey process" in the exhibition of that process made to the United States before the contract of April 12, 1893, and in

the process actually used for several years in the treatment of armor plates where the Government required the Harvey process to be used. (Finding III, Rec., pp. 25, 26.)

The learned counsel for appellee in the brief in support of their motion characterize certain other questions which were presented to the court below as "frivolous." They seem inclined to ridicule the defense of the Government that it is not liable, under the contract in suit, unless it *required* the armor plate which the Midvale Steel Company manufactured to be treated by the Harvey process, or *knowingly* accepted from said company plates which were treated by said process, which amounts to the same thing.

The question raised by this defense requires a construction of the contract provisions with reference to the *use* of armor plates manufactured by the Harvey process. The contract, it will be observed, in the quotation heretofore made, recited that the Harvey Steel Company is the owner of the process in question and "of the exclusive right to the use and employment of armor plates manufactured according to said process." It further provides that the United States is to have, not only the right to the "use and employment of said process" in the treatment of armor plates, but also the right to the use and employment of armor plates "manufactured according to said process."

Our contention is that the provisions of the contract only obligated the United States to pay the

royalty stipulated when it procured or induced the use of the Harvey process in the manufacture or treatment of armor plates, and that the provision as to the use and employment of the armor plates so manufactured is mere surplusage, and does not go to the extent of binding the United States to pay the royalty stipulated where it does nothing *more* than *use* armor plates manufactured by that process.

The recital under the "whereas" clause of the contract quoted, to the effect that the Harvey Steel Company is the owner of the right to use the process and also the *right to the use of armor plates manufactured by that process*, overstates the rights of the appellee under the patent it owned.

The patent granted Hayward A. Harvey covered process only. The finished product was not patented. The use of the finished product would, therefore, not be an infringement of the process patented, and any covenant or agreement on the part of the Harvey Steel Company to grant the exclusive right to use the finished product was *ultra vires*.

Suppose, for instance, the United States had purchased a warship complete, armored with plate which had been treated by the Harvey process, would it be liable, under this contract, to pay a royalty to the Harvey Steel Company because by becoming the owner of such a vessel it was making "use of armor plate manufactured by said process"? We say not, and that is substantially the situation in which the United States is placed with respect

to the use of armor plates made for it by the Midvale Steel Company if it be true that the process used was the "Harvey process." (Finding XVI, p. 34.) This proposition may seem frivolous to the learned counsel for appellee, but it is a view of the law of the contract held in good faith by the counsel for the United States, and is, we believe, sufficient to warrant a full hearing upon its merits.

If we are right in our view of the scope of the contract, it follows that the party using the Harvey process, assuming for the moment that it was used, is liable to the owner of that process, and not the party who used the finished product made by said process. In other words, appellee's remedy was against the Midvale Steel Company for infringement.

The issues raised and decided in the case 196 U. S. (supra) are entirely different from those presented in the case at bar. There, as Mr. Justice Holmes said in the opinion (p. 315):

> The main question is whether, under the last-quoted clause of the contract, the United States can set up the invalidity of the patent in this suit.

In the case at bar we are not questioning the validity of the patent.

In the former case the Government's contention was that inasmuch as the temperature of the plates in the heating furnace was not raised "above the melting point of cast iron"—3,100 degrees Fahrenheit—therefore, the process used did not conform to the process

patented. The Court of Claims found that the variation between the heat to which the plates were actually subjected and that which it was proposed or suggested in the claim of the patent would be required was "trivial." This court agreed with the Court of Claims as to the legal effect of this variation.

The plates were heated in the actual use of the process in the experimental treatment of plates when the process was being exhibited to the United States prior to the contract of April 12, 1893, as well as after that time. To make the facts in this case analogous to the facts in the former case, and to make the decision of the court in the former case the law in this case, it would necessarily have to appear that *some* noncarbonaceous material was used by the Midvale Steel Company in the process by which it face-hardened the armor plates manufactured by it for the Government. If in the former case it had appeared that the element of heat had been omitted entirely, as was the element of noncarbonaceous material in the present case, the facts would be similar, and the decision of the court in the former case might be said to be controlling in this case. But if such had been the fact in the former case, it goes without saying that the decision of the court would not have been what it was.

We feel that this statement of the Government's contentions in this case furnishes sufficient reason for disallowance of appellee's motion to affirm judgment.

Counsel for appellee request that in the event the court should decline to affirm the judgment and

should deem further argument necessary, it place the case upon the summary docket. The rule provides that cases may be transferred to the summary docket for hearing when it appears to the satisfaction of the court "that the case is of such a character as not to justify extended argument." (Rule 6, par. 6.)

We respectfully submit that it abundantly appears from the issues stated and the nature and character of the controversy between the parties that this case does not fall within either the letter or spirit of said rule.

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JAMES H. McKENNEY
Clerk

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1912.

No. 615.

THE UNITED STATES, APPELLANT,

vs.

HARVEY STEEL COMPANY.

No. 616

MIDVALE STEEL COMPANY, APPELLANT,

vs.

HARVEY STEEL COMPANY.

APPEALS FROM THE COURT OF CLAIMS.

BRIEF FOR MIDVALE STEEL COMPANY IN OPPOSITION TO MOTION TO AFFIRM OR TO TRANSFER TO SUMMARY DOCKET.

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Paragraph 5 of Rule 6 of the Rules of Practice of this court invites the submission of motions to affirm only in cases:

(1) Where it is manifest that the writ or appeal was taken for delay only, or

(2) Where the questions on which the decision of the cause depends are so frivolous as not to need further argument.

Paragraph 6 of the same rule provides for the transfer to a summary docket of cases wherein, although the court may refuse to grant a motion to dismiss or a motion to affirm, it may nevertheless conclude that the case is of such a character as not to justify extended argument.

In the case at bar the United States has appealed to this court from a judgment of the Court of Claims against it and in favor of the Harvey Steel Company for the sum of $123,467.23, the amount of royalties claimed by the latter to be due from the former under the terms of a certain contract dated April 12, 1893, between them for the use of a patented process for the manufacture of armor plate, which process is commonly called or spoken of as the "Harvey process;" while the Midvale Steel Company has appealed from so much of said judgment as dismisses its intervening petition, theretofore allowed to be filed in the cause, the armor plate in question having been manufactured and furnished by it to the United States under certain contracts which authorized but did not require said Midvale Company to employ the "Harvey process" as they also authorized the use in such manufacture of any "process satisfactory

to and approved by the Navy Department." It is provided in and by one of said contracts that said Midvale Steel Company should assume responsibility for royalties that might become due to the Harvey Steel Company for the use of the so-called "Harvey process" in the manufacture of the armor plate called for by it, and in and by the others that said Midvale Steel Company should hold and save harmless the United States from and against all demands for or on account "of the use of any patented invention, article, process, or appliance" used in the manufacture of armor plate and appurtenances thereunder.

The question at issue in the suit is whether the Midvale Steel Company used the "Harvey process" in the manufacture of armor plates which it delivered to and which were accepted by the United States under said contracts, the Midvale Steel Company specifically alleging that it had not used the "Harvey process" in connection with any of such manufacture.

The Court of Claims found (Finding III, p. 25) that the "Harvey process" mentioned in the contract of April 12, 1893, between the United States and the Harvey Steel Company, as said process is defined in United States Letters Patent No. 460,262, consisted of, among other things, the "inclosing of a low steel plate *between a mass of non-carbonaceous material on one side* and a mass of gran-

ular carbonaceous material firmly packed upon the other side, contained in a compartment formed within the heating chamber of a suitable furnace," and that the "Harvey process" actually used (in demonstration and by manufacturers of armor plate other than the Midvale Steel Company) consisted of (among other things) covering the scaled plate on one side "by carbonaceous material," "the side which was not to be carbonized" being protected by a non-carbonaceous material.

> " The non-carbonaceous material actually used in the 'Harvey process,' consisted of sand packed at the back of the plate to protect the same from the carbonaceous material and excessive heat, of which the Government was advised by the patentee by an exhibition of the process with the use of sand prior to the contract of April 12, 1893."

That "later" the use of non-carbonaceous material was discontinued, and that "since 1904 [eleven years after the date of the contract] no sand or other non-carbonaceous material has been used" by the companies manufacturing armor plate, this portion of the finding, however, not being regarded by appellants as material to the issues in this case.

Also that the process used by the Midvale Steel Company in the manufacture of the armor plate involved in this suit was as follows:

> "The plate to be carbonized was mounted face up, on brick piers about 18 inches high resting on the car bottom, about one foot apart. A row of bricks, two high, was then placed around the plate and the carbonizing material was put inside of these bricks on the face of the plate and raised about three-fourths of an inch above the bricks. Mortar was edged up on the second bricks. Then the second plate was placed on the carbonizing material, face down. The plates were then run into the furnace and the fire started."

And by way of deduction and comment added (pp. 26-27):

> "The brick box containing the carbonaceous material prevented the same from reaching the back and sides of the plates, thus accomplishing the same result as with the sand which was used to protect the back of the plate from the carbonaceous material *and excessive heat* as aforesaid."

The court further found (Finding XV, p. 23) that although the Midvale Steel Company in the manufacture of the armor plates in question "did not use sand or any other non-carbonaceous material to protect the back of the plate in the carbonization or supercarbonization of said plates," nevertheless the face-hardening process so used by "the Midvale Steel Co. was *substantially the same* as the 'Harvey process' hereinbefore described, and *the same result was accomplished without the use of sand or other non-carbonaceous material.*"

From the aforegoing the Court of Claims deduced and found as the ultimate facts, *"so far as they are questions of fact* (p. 35), that the Midvale Steel Company in the manufacture of armor plate for the Government *used substantially the Harvey process,* covered by said contract of April 12, 1893, *as defined in the patent"* (R., p. 35).

Upon such findings of fact the Court of Claims gave judgment in favor of the Harvey Steel Company and against the United States for $123,467.23 and dismissed the intervening petition of the Midvale Steel Company.

(All italics above ours.)

Contentions of Appellant Midvale Steel Co.

Very briefly stated, the contentions of appellant in the present case are: that the Court of Claims erred in its "Conclusion of Fact" (p. 35), in that the conclusion therein drawn does not necessarily or even naturally follow from the particular prior facts found, but on the contrary the court should have found from such particular prior findings that appellant had not used the "Harvey process" in the manufacture in question; that the "Conclusion of Fact" involves mixed questions of fact and law, as is necessarily inferable from the language of the Court of Claims used therein; that as matter of law the process as defined in the Harvey patent cannot be construed to cover the Midvale process; and, finally, that the decision of this court in the

prior suit (196 U. S., 310) does not support the application made of the principle of *res judicata,* because the issues in this suit were not, and could not have been, raised in the prior suit.

These positions will be more fully explained, but without exhaustive argument, hereinafter.

The Harvey Process and the Contract of April 12, 1893, in Suit.

The opinion of this court in *United States vs. Harvey Steel Company,* 196 U. S., 310, states sufficiently the events which led up to the contract of April 12, 1893, between the appellee and the United States, which contract is the basis of the appellee's claim here. Briefly, for the purposes of this case, it may be stated that Harvey was the inventor of a certain process for face-hardening armor plate. He disclosed this process to the United States. The process was tested by the Navy Department. On March 3, 1891, an option was given by the appellee (the owner of the process and of the application for patent then pending) to the United States to use the process in consideration of a certain royalty. This option was accepted by the United States on the same day. On September 29, 1891, the Harvey patent No. 460,262 issued, in which patent the Harvey process was described and claimed. On March 21, 1892, a contract was entered into between the appellee, Harvey Steel Company, and the United States which recited that the

[redacted] the owner of the patent rights to the "Harvey process" and set forth the above option [redacted] and provided for the use of the [redacted]. In the contract of March [redacted], the Harvey patent No. 480,262, was not [redacted]. The contract was in terms not a license [redacted] but was merely [redacted] to use an undefined, but doubtless clearly understood, process. In the meantime, up to the date of the contract of April [redacted], the process was further tested and actually used.

On April [redacted], the contract upon which this [redacted] was brought was entered into (R., p. 8). It [redacted] for the cancellation of the contract of [redacted]. It identified the "Harvey process," which the previous contract did not, specifically as the process "particularly set forth in letters patent of the United States, No. 480,262, issued September 20, 1892, to Hayward A. Harvey." Thus, the material clause of the contract reads as follows (R.):

> "Whereas the party of the first part is the owner of all and singular the patented rights in and to a certain process, known as the Harvey process, for the treatment of armor plates for use in the construction of vessels, and of the exclusive right to the use and employment of armor plates manufactured according to said process, as particularly set forth in letters patent of the United States, No. 480,262, issued September 20, 1892, to Hayward A. Harvey, of

Orange, New Jersey, for certain improvements in decrementally hardened armor plates and in the art of manufacturing the same."

In subsequent clauses of the contract the process is referred to as "the Harvey process aforesaid" or "the aforesaid Harvey process"; that is, the process defined in the Harvey patent No. 460,262.

In the clause commencing at the bottom of page 9 it is provided that the Harvey Company shall impart to the United States all information concerning any improvements which the Harvey Company "may, at any time in the future, make in or upon *said process as covered by the aforesaid letters patent.*"

In the next clause it is provided that if it should be judicially decided that the Harvey Company "is not legally entitled, *under the letters patent aforesaid*, to own and control the exclusive right to the use and employment of said process and the decrementally hardened armor plate produced thereunder, *as set forth in the letters patent aforesaid*, then the payment of royalty under the terms of this agreement shall cease," etc.

It will be observed that in no part of the contract of April 12, 1893, is the Harvey process *directly* identified except as the process defined in Patent No. 460,262.

It is clear, however, from the context, that the parties believed that the process of Patent No.

460,262 was identical with the process that had been actually used, and identical with the process that was the subject of the "canceled and annulled" earlier agreement of March 21, 1892, in which earlier agreement the process was identified as a process which was tested at the Naval Ordnance Proving Ground.

It is also clear that the Government intended by the contract of April 12, 1893, to obligate itself to pay royalties, not for *every* process for face-hardening or carburizing an armor plate, but only for the use of that specific process of face-hardening or carburizing an armor plate "known as the *Harvey* process"—in other words, only for the use of that process which had been disclosed to it and tested by it and actually used by it, and which, as we contend, had been in fact specifically described in patent No. 460,262. It is obvious that if the United States had contracted for the right to use the process that had theretofore been tested and used without otherwise identifying the process in the contract, and if, at a later date, the process thus actually tested and used became *changed*, there would be no standard by which to determine whether the changed process was a mere variation of the Harvey process or a *different process*. Consequently the process for the use of which the United States, by the contract of 1893, specifically obligated itself to pay royalties was stated to be the process "as particularly set forth in letters patent of the United States, No. 460,262." In a patent,

an inventor is required, in the claim, to "particularly point out and distinctly claim" that which he claims as his invention or discovery. Hence, by identifying the Harvey process contracted for as the process covered by Patent No. 460,262, in the event of subsequent departures or changes or upon the introduction of new methods in the course of manufacture it could be determined whether such changed or new process did or did not embody or constitute the Harvey process."

It may also be assumed that the Government would have been indisposed, as it would certainly not have been obliged, to indefinitely continue to pay royalties for the use of any process which was not original with Harvey and which neither he nor his assignee could prevent others from using; and that the Government had entered into the new contract of April 12, 1893—at least, among other reasons—*because* Harvey had succeeded in patenting the process which he claimed, and thus had raised a legal presumption of his exclusive right thereto.

Further, it may be noted that the identity between the process as patented in Patent No. 460,262 and the process known as the Harvey process is alleged in Clause II of the appellee's petition (R., p. 1). It is conceded by the appellee that the contract of April 12, 1893, like any other agreement of license under a patent, expired by virtue of the expiration of the Harvey patent No. 460,262, this be-

cause appellee seeks to recover royalties only for armor plate manufactured by the Midvale Company prior to September 29, 1908, the date of expiration of the Harvey patent.

The appellants are therefore clearly justified in insisting upon going to the claim of the Harvey patent No. 460,262 to determine the limitations of the "Harvey process," subject only to the qualification (in accordance with the opinion of this court in United States *vs.* Harvey Steel Co., 196 U. S., 310) that that claim must be construed as broad enough to cover the process actually tested and used prior to the date of the contract of April 12, 1893.

This must be so, not only as a matter of appellants' legal right, but also as a matter of necessity; for unless the Midvale process, like the process used by the United States in the prior litigation, be *identical* with the process actually tested and used prior to the contract of April 12, 1893 (and its *non-identity* clearly appears from the findings of the Court of Claims in the case at bar), there is no standard other than the claim of the patent by which to determine whether it is a mere modification of the Harvey process (as alleged by appellee) or a different process (as alleged by appellants).

It would seem therefore to be evident that recourse may be had to the claim of the Harvey patent to aid in determining the precise steps which make up the Harvey process. Indeed appellants may properly assert that, in view of the identity

between the patented process and the process actually tested and used prior to the contract of April 12, 1893, there is no other source from which we can differentiate the steps in the complete process that are essential in the practice of the Harvey process from the steps therein that are non-essential—it being borne in mind that the sole issue in the case at bar is the determination of the question whether a process, such as that employed by Midvale, which does not involve or include a certain element confessedly involved and included in both the claim of the patent and in the demonstration and test made prior to the contract of April 12, 1893, is or is not the "Harvey process."

The definition of the Harvey process as set forth in the claim of the Harvey patent No. 460,262 is preserved in Finding of Fact III, p. 25, of the findings of the Court of Claims. We submit that the appellee cannot, as it seeks to do, force this court to shut its eyes to the terms of the patent and decide the case as if the patent were non-existent. If we are right in this, it follows that this court should examine this patent and determine whether the definition of the Harvey process found therein (with due regard to the process as actually practiced and used before the date of the contract of April 12, 1893) is binding upon the parties to the contract of 1893. Both of these questions are questions of law—in whole or in part, and we think in whole—which appellants are entitled, and should reasonably be accorded, the fullest opportunity to argue.

The Prior Litigation.

We are unwilling to accept as correct either appellee's statement of the issues involved in case 21110, reported in United States *vs.* Harvey Steel Co., 196 U. S., 310, or its statement of the matters actually decided in that case. We shall, without going outside the opinion itself, except to briefly refer to certain findings of fact in that case, endeavor to point out the issues actually raised and decided therein, and shall then endeavor to show that no such issues are raised in the case at bar, but that on the contrary a distinctly new issue is now raised, which was not and could not have been raised in the prior case.

A careful consideration of the opinion of this court in 196 U. S., 310, will show that that case was decided against the United States on the ground of *estoppel*.

The opinion shows that the process employed by the United States subsequent to the contract and on which it was sought to collect the royalties provided for in the contract, was identical with the process that had been actually disclosed to and was used by it prior to the date of the contract of April 12, 1893. This is evident from the statements in the opinion (p. 315) that "The United States has [since the date of the contract of April 12, 1893] built battleships armored by the Harvey process communicated to it," and that "it is not denied

that it has used the process communicated to it and known in common speech as the Harvey process." Further, the findings of fact in the first case (which are made part of the findings of fact in this case, see appellee's brief (p. 5) show (R. case, 21110, pp. 29-30) that the United States "publicly advertised for proposals for 6,000 tons of armor plate, to be treated by the 'Harvey process,'" "the advertisement being made a part of each contract;" that "This armor plate was inspected and tested by officers of the Ordnance Bureau and was accepted and paid for as 'armor treated by the Harvey process;'" and that "The process employed was precisely the process employed in the previously manufactured armor plates."

It was on armor plate so advertised and made that the claimant there sought to recover the license fees stipulated in the contract of April 12, 1893.

It is also clear that the process there by the United States on which it was sought to collect royalties was identical with the *patented* process, with the *possible* exception that a degree of heat was used below that to which the claim of the patent was restricted. The United States sought to contend that "the patent was invalid, or, if valid, valid only if restricted to the use of a heat above 3100° Fahrenheit, in which case the patent was not used by the United States" (p. 315).

This court held: *First*, that the United States could not set up as a defense to the action the in-

validity of the patent, and *second* (without determining whether there was a variation from the patent with respect to temperature), that, as the temperature was the same as that employed in the process as actually practiced and used and which the parties intended to be the subject-matter of the contract, the United States was estopped from contending that such alleged variation was material.

The law as announced in that case is accepted by the Midvale Company without demur. Our contentions as to the actual issues in the prior case is based on the unequivocal language of this Court. as, for example, the following language, to be found on page 315 of its opinion, supports our contentiou that the first and main question was whether the United States could set up the invalidity of the Harvey patent No. 460,262 as a defense to the action:

> "*The main question* is whether, under the last quoted clause of the contract, the United States can set up the invalidity of the patent in suit."

And the court, in disposing of the main question, decided that a licensee, when sued for royalties, is estopped to deny the validity of the patent which he has been using (pp. 315-317).

The following language on page 315 of the opinion (immediately following the above quotation) supports our contention that the second and only

other question was whether the United States could avail itself of the defense that it did not use the patented proce[illegible]though it did use the process communicated to it and known in common speech as the Harvey process:

> "*It is argued also* that the United States ought to have been allowed to show that it had not used the patent, properly construed, although it is not denied that it has used the process communicated to it and known in common speech as the Harvey process."

Neither of these defenses is raised in the case at bar, but their unsoundness is conceded. It is therefore idle for appellee to contend that the former decision of the court constitutes the issues here *res judicata*.

In deciding the issue as above defined by this court, the opinion proceeds as follows (pp. 317-318):

> "We have somewhat more difficulty with the other question mentioned. It is argued that the agreement was only to pay for the use of the process covered by the patent named, and that if the meaning of the parties was to cover anything broader than the patent, even what was known in their speech as the Harvey process, that meaning could be imported into the contract only by reformation, not by construction of the contract as it stands."
>
> * * * * * * *

"The argument is that at the time of the contract it was supposed that the heat required for the process was greater than that actually used, that the patent was valid only for a process with the greater heat, and that the contract covers no more than the patent. But the fact that the parties assumed that the process used and intended to be used was covered by the patent, works both ways. It shows that they thought and meant that the agreement covered and should cover the process actually used. We think that this can be gathered from the agreement itself apart from the mere supposition of the parties. The contract dealt with a process 'known as the Harvey process.' It imported the speech of the parties and the common speech of the time into the description of the subject-matter. The words 'Harvey process' commonly are put in quotation marks in the first contract, thus emphasizing the adoption of common speech. They mean the process actually used. The contract states that it is dealing with the same thing that had been the subject of the former agreement. That agreement further identified that subject as a process which was tested at the Naval Ordnance Proving Ground. It also identified it, it is true, as a patented process, but, if the incompatibility of the two marks is more than trivial, as it was regarded by the court which found the facts with which we have to deal, the identification by personal familiarity and by common speech is more pungent and immediate than that by reference to a document couched in technical terms, which the very argument for the

> United States declares not to have been understood. It is like a reference to monuments in a deed. As we have said, this identification by personal experiment and by common speech is carried forward into the contract in suit. The latter contract manifests on its face that it is dealing with a process actually in use, which requires the communication of practical knowledge and which further experience may improve."

From the above language it is difficult to see wherein appellee finds support for its argument that the contract of April 12, 1893, precludes reference to the Harvey patent No. 460,262, and that the identification in the contract of the "Harvey process" as one covered by said patent must be absolutely ignored. On the contrary, this court made it entirely clear that it was proper and necessary to consider both marks of identification (the patent, and the process as actually disclosed and used), but that if there were any incompatability between the two marks the process patented must yield to the process actually disclosed and used.

The process used by the United States and its contractors involved in that case, and for which use the Harvey Steel Co. there sought to recover royalties, being *identical* with the process actually disclosed to and used by the United States prior to the contract of April 12, 1893, *there was no occasion in that case to consider the terms of the patent*, and the case of the United States necessarily failed.

One feature of the opinion on which we desire to lay great stress is that *the court did not, at any stage thereof, attempt to ascertain and define the "Harvey process."* Whatever the Harvey process actually disclosed to and used by the United States prior to the contract of April 12, 1893, may have been, that was admittedly the process used in the manufacture of the armor plate covered by that case.

The Issues in the Present Case.

In the case at bar the issue is a totally different one, in that the Midvale Company employed in its manufacture of armor plate for the Government a process *not* the same as the Harvey process, either as claimed in the patent, or as disclosed, tested, and used prior to the date of the contract of 1893, and for the subsequent use of which this court, in the prior case, had held the United States was bound to pay the stipulated license fees. This, it may be stated, is clear, not only from the findings of fact, but is conceded by appellee. What is not conceded by the appellee, but is asserted by appellants, is that the process actually used by the Midvale Company is so different from the Harvey process either as patented, or as actually disclosed and used at the date of the contract of April 12, 1893, as to constitute not a modification of the Harvey process, but a different process.

The court will thus see that the issue in the

present case was neither raised, nor could it have been raised, in the prior case.

To ascertain which position of the parties hereto is correct, it is necessary that the court should first determine what the "Harvey process" is, and then compare that process with the process actually used by Midvale, to determine whether, in fact and in law, they are the same. What the Harvey process is is not to be determined by any present-day assertion of appellee's counsel as to what may or may not be the essential feature of the Harvey process, but is to be determined by what Harvey himself defined his process to be in the patent forming the basis of the contract of April 12, 1893, so far, at least, as such definition accords with the process actually disclosed to the Government and which the Government thereupon actually used and which the contracting parties supposed was the subject-matter of the contract.

Now the Court of Claims in the present case has found, *inter alia*, what was the Harvey process as defined in the patent and as actually used at the date of the contract. It has found what was the process actually employed by the Midvale Company. And then it has found (p. 35) the "ultimate facts" to be, "so far as they are questions of fact, that the Midvale Steel Company, in the manufacture of armor plate for the Government, used *substantially* the Harvey process covered by said contract of April 12, 1893, *as defined in the patent.*"

The "conclusion of law" would be clearly reviewable by this court, even if it were solely a conclusion of fact, for if the ultimate fact found does not follow logically from the other facts found, appellants are clearly entitled to the fullest opportunity to be heard before this court. Still more clearly is the conclusion of fact subject to review on appeal because it involves an interpretation of the claims of the patent, which, as before pointed out, is solely a question of law. Appellants are not only entitled to have the claims of the patent construed for the reasons hereinbefore developed, but also because the ultimate conclusion upon which appellee must rely finds that Hildreth used the process "claimed in the patent."

Now, a significant feature of the case at bar is that appellee insists that this court shall find the Harvey process, as patented, and as actually disclosed and used prior to the date of the contract in suit, to be something different from what it was found to be by the Court of Claims, whereas appellants insist that the Harvey process, as patented, and as actually disclosed and used prior to the date of the contract in suit, is precisely what the Court of Claims found it to be.

Says the appellee (pp. 2 and 3, Brief in Support of Motion to Affirm):

> "The Harvey process referred to in the patent may be fairly characterized, for the purposes of general explanation, as a process of face hardening armor plates of

soft or low steel by prolonged and deep carbonization at a very high temperature for a number of days, which, on rapid cooling, produces a glass hardness at the surface and gradually decreasing hardness and decreasing proportions of carbon for a certain depth below the surface. The impact face only of the plate in applying the process is in contact with solid carbon, the back being protected from the carbon."

This is merely a description of the Harvey process emanating from the mouth of counsel—not a definition of the Harvey process found by the Court of Claims, but one which the Court of Claims refused to find. It is (as we shall show) a fragmentary and inaccurate statement of certain characteristics and results of the Harvey process, framed in language skillfully designed to make it apply as well to the Midvale process.

What the Harvey process actually is, as claimed in the patent forming the basis of the contract of April 12, 1893, is found by the Court of Claims as follows (Finding III, p. 25):

"1. The herein described method of producing a decrementally hardened tenacious armor plate, which consists of inclosing a low steel plate between a mass of non-carbonaceous material on one side and a mass of granular carbonaceous material firmly packed upon the other side contained in a compartment formed within the heating chamber of a suitable furnace and in maintaining the said heating chamber for a pre-

determined period of time at a temperature above the melting point of cast iron, and in subsequently chilling said plate, whereby a stratum of steel of prescribed thickness upon the side of the plate against which said carbonaceous material has been pressed is made to acquire a heterogeneous crystalline structure and a condition of excessive hardness upon its exposed surface and a condition of gradually diminishing hardness as the depth from said surface increases."

This is the "Harvey process" as defined by Harvey himself in his patent. It defines what the Patent Office, after due examination of the prior art, found to be the specific process that Harvey had invented. As a matter of law, all the steps set forth in the claim of a patent are conclusively presumed to be essential, the omission of any one of them avoids the patent and constitutes, in law, a different process.

It will be observed that this claim of the patent requires that the plate to be carburized shall be enclosed "*between a mass of non-carbonaceous material on one side* and a mass of granular carbonaceous material firmly packed upon the other side"; the purpose of the non-carbonaceous material being, as the court finds (p. 27, lines 1-3) "to protect the back of the plate from carbonaceous material and *excessive heat*." It will also be observed that the claim requires that this plate, so enclosed between a mass of non-carbonaceous material on one side and a mass of granular carbonaceous ma-

terial on the other side, shall be "contained in a compartment formed within the heating chamber of a suitable furnace," that the heating chamber shall be maintained for a predetermined time at a stated temperature, and that the plate shall be subsequently chilled. The remainder of the claim is merely a statement of the result produced by the steps previously enumerated.

Now, as appears from the decision of this court in the prior case, the process disclosed by Harvey to the United States and which was actually used prior to the date of the contract in suit and for the use of which subsequent to the date of said contract the United States was held obligated to pay the stipulated royalties, was precisely the same as the above process with one possible exception, namely, that the degree of heat specified in the patent claim was alleged by the United States to be greater than that actually used in practice. Whether the process as actually disclosed and used did deviate from the patent claim in the matter of temperature may be gravely questioned. The Court of Claims was "by no means satisfied, as a matter of fact, that there was such a deviation" (Record in former case No. 21110, bottom of page 36). This court did not decide whether there was or was not such a deviation. And it is entirely immaterial, in the case at bar, whether there was such a deviation in the former case, for the reason that it is not sought, in the matter of temperature, to differentiate the Midvale process from the Harvey process either as disclosed, used, or patented. For

the purposes of this case the temperature of the heating step of the process may be assumed to be *any* temperature.

With this understanding the above-quoted definition may be taken, and must be taken, to be the definition of the Harvey process to which the Midvale process must conform if the Midvale process be the "Harvey process." That is, the question whether a licensee under a patent is practicing the patented process is to be decided by applying precisely the same rules as are applicable where the question is whether an unlicensed user infringes the patent.

It is well settled that the claim of a patent is the measure of the invention.*

It is also well settled that in a process, as in a combination of mechanical elements, the invention is not practiced unless *all* the steps or elements are appropriated.

It is also well settled that a claim covers the particular combination of steps recited therein and not the result attained.

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*Citation of authorities in support of propositions of law is believed to be unnecessary in a brief in opposition to a motion to affirm.

Comparison of Midvale Process as Defined by the Court of Claims with the Harvey Process as Defined by the Court of Claims.

Bearing the principles just above stated in mind, let us compare the Midvale process with the process defined and claimed in the Harvey patent.

The Midvale process is thus defined by the Court of Claims (Finding of Facts III, bottom page 26):

> "The process used by the Midvale Steel Co. in the manufacture and production of armor plate was as follows: The plate to be carbonized was mounted, face up, on brick piers about 18 inches high resting on the car bottom, about 1 foot apart. A row of bricks, 2 high, was then placed around the plate and the carbonizing material was put inside of these bricks on the face of the plate and raised about three-fourths of an inch above the bricks. Mortar was edged up on the second bricks. Then the second plate was placed on the carbonizing material, face down. The plates were then run into the furnace and the fire started."

It will be observed that between the Midvale process and the Harvey process there is at least one vital difference, namely, that in the Midvale process the plate to be carbonized is not enclosed "between a mass of non-carbonaceous material on one side and a mass of granular carbonaceous material firmly packed upon the other side contained in a compartment formed within the heat-

ing chamber of a suitable furnace," but, on the contrary, two plates with the carbonaceous material confined between, are placed directly within the furnace. *Neither plate,* as in the Harvey process, *is confined between a mass of non-carbonaceous material* and a mass of carbonaceous material; but the backs of the plates which are not to be carburized are wholly unprotected by non-carbonaceous material, as required in and by the Harvey process, or in any other manner, from the excessive heat of the furnace, but on the contrary such surfaces are directly exposed thereto.

The Midvale process cannot be the Harvey process, if for no other reason than because it omits a step or element of the Harvey process that, in law, must be conclusively presumed to be essential to the process.

That the protection of the back of the plate from the excessive heat of the furnace by the application of non-carbonaceous material thereto was a feature of the process as originally disclosed by Harvey and as actually used prior to the date of the 1893 contract and actually used in the manufacture of the plates involved in the prior case, is sufficiently clear from what has already been stated; but it is also clear from the finding of the Court of Claims in the case at bar. The court finds (R., p. 26):

> "The Harvey process actually used was as follows: The scaled plate was covered by carbonaceous material either by putting the

carbonaceous material on the bottom of the furnace and placing the plate thereon with the scaled side down or by placing the carbonaceous material on the plate and using another plate on top of it to insure contact. The plates were then placed in the furnace and the side which was not to be carbonized was protected at first, by sand * * *

"The non-carbonaceous material actually used in the 'Harvey process,' consisted of sand packed at the back of the plate to protect the same from the carbonaceous material and excessive heat, of which the Government was advised by the patentee by an exhibition of the process with the use of sand prior to the contract of April 12, 1893."

It will thus be seen that, with respect to any issue raised in the case at bar, the Harvey process as "actually used" was identical with the Harvey process as patented, in that sand (non-carbonaceous material) was packed at the back of the plate.

It must be conclusively presumed that a feature of the process both actually used and incorporated in the claim of the patent was deemed by Harvey and the appellee to be essential.

In the last quotation we have eliminated the part of the paragraph beginning "Later." It appears that "Later" [1904] a certain process was practiced which was substantially the same as the Midvale process. But this was not the Harvey process

and the Court of Claims does not affirmatively find to the contrary. As a matter of fact, the protection of the back of the plate by means of non-carbonaceous material was not abandoned by the armor plate manufacturers until 1904, after the Midvale Steel Company had already entered the field; *e. g.*:

> "Since 1904 no sand or other non-carbonaceous material has been used by the Carnegie and Bethlehem companies manufacturing armor plate" (Findings of Fact, p. 26).

It is true that the contract of April 12, 1893, provided that the Harvey Steel Co., party of the first part, shall "impart to the party of the second part (the United States) all information concerning any and all improvements which said party of the first part may, at any time in the future, make in or upon said process as covered by the aforesaid letters patent," and appellee argues that this clause eliminates the patent from the case. But there is no finding that the Harvey Steel Company ever communicated the process used by Midvale to anybody, or that the Midvale process was communicated by anybody to the United States. Further, the Midvale process is not an "improvement" on the Harvey process. An improvement on a process necessarily embodies the process that is improved, whereas the Midvale process, as above explained, is a different process.

Finally, it may be argued that the Court of Claims has found (bottom of page 26 and top of page 27) that the brick box confining the carbonaceous material between the plates in the Midvale process accomplishes the same result as the sand or other non-carbonaceous material, and that therefore Midvale has an equivalent for the sand. But the very language of the finding excludes, as a matter of law, the possibility of equivalency. The function of the sand is found by the court to be "to protect the back of the plate from carbonaceous material and *excessive heat.*" That is also found on page 26, lines 29 and 30, to be the function of the sand. While the court finds that the brick box in the Midvale process prevents the carbonaceous material from reaching the back of the plate, it does not find, and, of course, could not have found, that Midvale's brick box protects the back of the plate from the excessive heat of the furnace, since the back and edges of Midvale's plates are concededly wholly unprotected from such heat of the furnace.

"One thing may be an equivalent of another, though it does more than that other, but it cannot be such an equivalent if it does less" (Walker on Patents, sec. 352, and cases cited). As there is concededly nothing in the Midvale process that, like the non-carbonaceous material of the Harvey process, performs the function of protecting the back of the plate from *excessive heat*, the Midvale

Company, lacking a step or element of the Harvey process which, as a matter of law, must conclusively be presumed to be essential to the Harvey process, is not the "Harvey process."

It necessarily follows, as we claim, that the conclusion to which the Court of Claims arrived, viz., that the Midvale process is substantially the Harvey process of the contract in suit as defined in the patent, is erroneous.

Whatever view this court may ultimately take of the issues involved, it is respectfully submitted the case is not one for summary disposition by affirmance, nor one which ought reasonably to be transferred to the summary docket. On the contrary, the contentions urged by appellants are such as are entitled to be argued in the usual and customary manner.

Reply to Appellee's Argument.

Having set forth affirmatively appellants' position, it is perhaps needless to otherwise answer the brief in support of the motion to affirm. It can readily, however, be shown that the propositions advanced by appellee, and upon which its motion to affirm is based, are unsound. These propositions, numbered respectively points I, II, III, IV, and V, are set out in bold type on pages 4, 8, 12, 14, and 18 respectively and read as follows:

I. The "Harvey process" and history of its development and adoption by the United States.

II. The construction placed upon the contract by this court is *res judicata*.

III. The contention that the patent limits and defines the "Harvey process" of the contract cannot be considered on these appeals.

IV. The question whether the "Harvey process" was used is one of fact and is not reviewable.

V. The other questions are frivolous.

Point I is not a proposition and need not be discussed.

In discussing point II, *supra*, appellee's brief proceeds on the assumption that this court, in United States *vs.* Harvey Steel Co., 196 U. S., 310, decided that resort could not be had to the Harvey Patent No. 460,262 in construing the contract of April 12, 1893, and that such holding is *res judicata*.

Appellants' contention is that this court did not so hold, but on the contrary held that the contract identified the Harvey process as that set out in the patent, and also identified it as the process actually tested and used prior to the date of the contract, and held that if the two marks were incompatible (whether or not they were in that case this court did not decide) the process actually used at the date of the contract would have to govern. The process for the use of which it was sought to re-

cover royalties in that case being identical with the process as described, tested, and previously actually used, there was no occasion to consider the process as defined in the patent. Appellants' position is entirely in harmony with the above holding.

Appellants also contend that such holding, even if the present case be supposed to involve a challenge of it in any respect, is not *res judicata*. The party appellee is the same, and one of the parties appellant is the same, as in the prior case, but (as the findings of fact show) the issues are different, in that it is contended that the process practiced by the Midvale Steel Company is not identical with that practiced by the manufacturer in the prior litigation.

It follows from the foregoing that appellee's point III is also unsound, it being clear from the decision of this court in the prior litigation that the process as claimed in Harvey Patent No. 460,262 is at least *relevant* to the ascertainment of the exact nature of the "Harvey process," but not controlling if the process actually used and disclosed at the date of the contract of April 12, 1893, varied therefrom. Inasmuch as appellants here assume precisely the position that the appellee (Harvey Steel Co.) urged in the prior litigation—namely, that the patented process and the process actually used are identical—it is clear that the

terms of the patent not only can, but must, be considered on this appeal.

The Harvey Steel Co., in urging point III, places itself directly in opposition to the conclusions of the Court of Claims in the case at bar, for that court held (Finding of Fact III, p. 25) that the "Harvey process" of the contract of April 12, 1893, was as defined and set forth in the patent and quoted in full the patent claim, and also held as its ultimate conclusion (p. 35) that the Midvale Steel Company used substantially the process *as defined in the patent*.

Surely the appellee cannot ask this court to summarily affirm a judgment on grounds inconsistent both with a decision of this court that it claims constitutes the issues in the present case *res judicata* and also with the findings of the trial court whose judgment it urges to be summarily affirmed.

In discussing point IV, appellee's brief proceeds on the mistaken theory that the only issues before the Court of Claims were questions of fact, and that the Court of Claims having found, as a fact, that the Midvale Steel Company had used *substantially the* "Harvey process" of the contract of April 12, 1893, in the manufacture of the armor plate involved in this suit, therefore this court must necessarily affirm the judgment of the Court of Claims.

On the contrary this conclusion of the Court of Claims involves a mixed question of fact and law as was recognized by the Court of Claims.

The contention of the Midvale Steel Company as well as of the United States before the Court of Claims, and their contention here, is that to determine whether the "Harvey process" of the contract of April 31, 1903, was practiced by the Midvale Steel Company in manufacturing the armor plate in question for the United States required, first, an exact ascertainment of the essential steps comprising the "Harvey process," which essentials are ascertainable only by resource (a) to the Harvey Patent No. 699,232, and (b) to the process as disclosed to the United States and tested at the Naval Ordnance Proving Ground and actually used at the time of the contract (this is in accord with the decision of the court in United States vs. Harvey Steel Company, 196 U. S., 310); and secondly, a comparison of the process so ascertained with the process practiced by Midvale in its manufacture.

Inasmuch as the construction of the patent is a question of law (Winans vs. Denmead, 15 Howard, 330; Cooper vs. Rogers, 196 U. S., 305), the conclusion reached on it by the Court of Claims (p. 35), "that the Midvale Company in the manufacture of armor plate for the Government used substantially the Harvey process covered by said contract of April 31, 1903, as defined in the patent"—is a mixed question of fact and law.

That the Court of Claims recognized that its conclusion was not wholly one of fact, and that

because it involved a construction of the patent, is apparent from the language in which such conclusion was expressed, for the court precedes its above indicated conclusion by the words: "The court finds the ultimate facts, *so far as they are questions of fact*," &c.

Thus again as to point IV as well as to point III, appellee must assume a position contrary both to reason and to the findings of the Court of Claims to afford a basis for the argument that the questions involved are wholly questions of fact and not reviewable.

Further the conclusion of the court is not binding, even so far as it is a conclusion of fact, if, as appellants contend, it is inconsistent with the antecedent particular findings of fact.

It is clear, therefore, without going beyond the decision of this court in *United States vs. Harvey Steel Company*, 196 U. S., 318, and the findings of the Court of Claims in the case at bar, that appellee's motion for judgment depends upon considerations which find no support in either and are in direct conflict with both, and therefore such motion is destitute of any proper foundation.

It is respectfully submitted that the motion to affirm judgment or transfer case to the summary docket should be denied in its entirety.

Should the court be of opinion that the case, by analogy to the provisions of paragraph 4 of Rule 26 of the Rules of Practice may properly be advanced for early argument without restrictions on the time for argument such as attend cases transferred to the summary docket, such an advancement would be welcomed by the Midvale Steel Company.

A. H. Wintersteen,
Frederic D. McKenney,
Frank S. Bussey,
Attorneys for Midvale Steel Company.

January, 1913.

Supreme Court of the United States.

OCTOBER TERM, 1912.

No. 615.

THE UNITED STATES,

Appellant,

vs.

HARVEY STEEL COMPANY,

Appellee.

No. 616.

MIDVALE STEEL COMPANY,

Appellant,

vs.

HARVEY STEEL COMPANY,

Appellee.

APPEALS FROM THE COURT OF CLAIMS.

Supreme Court, U.S.
FILED.
DEC 17 1912
JAMES H. McKEN

MOTION TO AFFIRM AND SUPPORTING BRIEF.

JAMES R. SHEFFIELD,
JAMES J. CORBETT,
Counsel for Appellee.

New York:
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Supreme Court of the United States.

OCTOBER TERM, 1911.

No. 1090.

THE UNITED STATES,
Appellant,

vs.

HARVEY STEEL COMPANY,
Appellee.

No. 1091.

MIDVALE STEEL COMPANY,
Appellant,

vs.

HARVEY STEEL COMPANY,
Appellee.

Appeals from the Court of Claims.

MOTION TO AFFIRM.

Now comes the Harvey Steel Company, the appellee, by its counsel, and moves this Honorable Court that the judgment of the United States Court of Claims herein be affirmed under paragraph 5 of Rule 6 of this Court.

JAMES R. SHEFFIELD.
Counsel for Appellee.

SUPREME COURT OF THE UNITED STATES,

OCTOBER TERM, 1911.

No. 1090.

THE UNITED STATES,
Appellant,

vs.

HARVEY STEEL COMPANY,
Appellee.

No. 1091.

MIDVALE STEEL COMPANY,
Appellant,

vs.

HARVEY STEEL COMPANY,
Appellee.

Appeals from the Court of Claims.

SUPPORTING BRIEF.

Statement.

These two appeals are from a single judgment in one suit entered in the Court of Claims in favor of the Harvey Steel Company, appellee, and against the United States, appellant, for the sum of $123,467.23. The judgment was entered on May 1, 1911.

On November 13, 1911, the Court overruled motions for a new trial and confirmed the judgment (R., pp. 60, 61). This judgment is for royalties for the use of the "Harvey Process" in making armor under an express contract entered into on April 12, 1893, between the appellee and the United States. The contract has never been repudiated by the United States.

The suit was brought against the United States as sole defendant. After the evidence was closed, the Midvale Steel Company (which had manufactured the armor involved in this suit) was allowed, against the protest of the claimant, and without the permission of the United States, to intervene. The judgment dismissed the intervening petition. On the *ex parte* application of the Midvale Steel Company the Court of Claims allowed it to also appeal from the judgment rendered (R., pp. 60-62).

By the terms of this contract, the United States was granted the right to use for the treatment of armor plate for its vessels the "Harvey Process" and any and all improvements made by the Harvey Steel Company upon such process, and to use and employ the armor plates manufactured according to said process. The United States agreed to pay the Harvey Steel Company a royalty of one-half cent per pound on the finished plate (R., pp. 8-10, 47-50).

The present suit is the third which the Harvey Steel Company has been compelled to bring against the United States in the Court of Claims to recover royalties under this same contract. In each of these suits the Harvey Steel Company has been successful. The first suit was appealed by the Government to this Court, which fully sustained the

findings of the Court of Claims (*Harvey Steel Co. v. United States*, 196 U. S., 310). In the second suit no appeal was taken by the United States from the judgment of the Court of Claims. The armor involved in these two previous suits was manufactured by the Carnegie Steel Company and the Bethlehem Steel Company. The armor involved in this suit (which armor has been accepted and paid for by the United States) was manufactured by the Midvale Steel Company under four contracts, which that company entered into with the United States long after the contract of April 12, 1893, made by the appellee with the United States. (R., pp. 25, 27, 29-32; Findings II, IV, V, VII, VIII, XI and XIII).

In the present suit a large amount of evidence was taken on behalf of the Harvey Steel Company. After this evidence was concluded the Midvale Steel Company was permitted to intervene and to take part in the defense (R., pp. 19, 25). No evidence of any kind was introduced on behalf of the United States. The only evidence introduced by the intervenor consisted of a few documents and patents, some of which were already in the case, and the evidence of a single witness to verify his deposition taken before a Committee of the Senate of the United States.

The parties, including the Midvale Steel Company, in its intervening petition (R., p. 23), as well as the Court of Claims, asserted that the primary issue in the case was one of fact, viz.: Did the United States use the "Harvey Process" of the contract?

Upon the evidence the Court of Claims found as a fact that the United States had used such process,

and filed a written opinion and rendered the judgment accordingly (R., pp. 26, 27, 33, 35-40).

The only questions involved on these appeals are the following:

(1) Is the "Harvey Process" of the contract limited and defined by one of Harvey's patents?

(2) Did the United States use the "Harvey Process" of the contract?

(3) If it did use the "Harvey Process," is it liable for the royalty?

The first question has already been determined in the negative by this Court in the prior suit.

The second question is one of fact determined in the affirmative by the Court of Claims and not reviewable here.

The last question, it will be shown, is obviously frivolous.

I.

The "Harvey Process" and History of Its Development and Adoption by the United States.

The Harvey process referred to in the contract may be briefly characterized, for the purposes of general explanation, as a process of face hardening armor plates of soft or low steel by prolonged and deep carbonization at a very high temperature for a number of days, which, on rapid cooling, produces a glass hardness at the surface and gradually decreasing hardness and decreasing propor-

tions of carbon for a certain depth below the surface. The impact face only of the plate in applying the process is in contact with solid carbon, the back being protected from the carbon.

The plates treated by this process became known as Harveyized, or Harveyed, or Harvey plates, and the "Harvey Process" attained at once world-wide recognition as the greatest advance made in the manufacture of armor. As was stated by Mr. Justice Holmes in the first suit, it was

> "* * * a process which has revolutionized the naval armor of the world" (196 U. S. p. 319).

The findings in the first case (38 Ct. Cls., 664-689), which are made part of the findings of fact in this case (R., p. 25, Finding II), and the opinion of this Court, in that case give the history of the development of the "Harvey Process" and its adoption and use by the United States. For the convenience of the Court such history condensed from the findings and opinion or from the general knowledge of all well-informed persons, may be briefly summarized as follows:

No step in the development of modern armor was of greater importance than the introduction of the "Harvey Process" of face hardening, originated by the late Hayward A. Harvey. Prior to 1889, the year in which he first treated a block of steel by the process which has since borne his name, armor making had made little progress and was in a purely experimental stage.

Prior to 1889 the best armor consisted either of a single steel plate made hard throughout (which, when struck by a projectile tended to crack or

break under impact), or the so-called "compound armor which consisted of a hard steel face welded to a soft wrought iron back. The theory of this latter plate was correct, but the means of obtaining the results sought were wrong, for the compound armor, when struck, tended to separate at the weld, causing the hard face to break off from the back, thus leaving nothing but the soft iron backing, which had little power of resistance.

It was at this critical period in the history of armor making and when our Navy Department was compelled to decide what kind of armor it would adopt for the first vessels of the reconstructed Navy, that Mr. Harvey came forward with his great discovery and was induced to reveal the secret thereof to the Navy Department.

From the findings of the Court of Claims it appears that in 1890, three years before the contract in suit was made, a specimen armor plate was exhibited to the Chief of the Bureau of Ordnance, and he was informed that Mr. Harvey had discovered a process for hardening such plates that would produce a plate of a combined hardness and toughness greater than anything theretofore attained. To test this invention Commander Folger, the Chief of the Bureau of Ordnance, procured two plates from a well-known steel manufacturer. One of these was given to the Harvey Steel Company to be treated by the Harvey process, and the other was retained by the Bureau of Ordnance. Both were subjected, ultimately, to the same tests.

The results of these tests were so remarkable that further tests were ordered, this time with the best foreign plates that could be purchased. The

Chief of the Bureau of Ordnance, reporting on this test, stated (R., p. 3):

> "These results are remarkable and indicated to the Department a probability that in this treatment had been found the means of producing the ideal armor plate—a hard front combined with a tough back without any weld or line of demarcation between the two."

Following these tests, and on the 3rd of March, 1891, at the request of the Navy Department, an option was given to the Government for the purchase of the right to use the "Harvey Process" upon vessels which had at that time been authorized. At the date of the acceptance of this option, no patent had been issued for the process, nor was any such patent issued until more than six months later, namely, September 29, 1891.

After further tests, and on March 2[illegible], 1892, the United States sought and entered into a written agreement with the Harvey Steel Company to purchase the right to employ the "Harvey Process" in Harveyizing armor for twelve designated vessels.

Thereafter, many additional armor plates were submitted to numerous experimental tests by the claimant and by the officers and agents of the United States, and on the 8th of October, 1892, the claimant was notified that the said process was definitely and formally adopted by the Navy Department in a letter of that date, as follows (R., p. 6):

> "You are informed that the Harvey* process for armor plate has been definitely adopted by the Navy Department."

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*The word "Harvey" is omitted from the copy in this record, but appears in the original.

At the request of the United States, the contract of March 21, 1902, was abrogated and in its place the contract in suit was entered into on April 12, 1905, which gave the United States the unlimited right to use the "Harvey Process" upon any vessels then built, or thereafter to be built. It also provided that the United States should have the right to use any and all improvements in the "Harvey Process."

As the Court said (220 U. S. 334):

> "In pursuance of the offer mentioned in the contract" (of March 21, 1902) "the Navy Department employed and received from Harvey a revelation of the secret processes and improvements, and thereafter, on April 12, 1905, the parties made a new contract upon which this suit is brought." (Italics ours.)

For the rights granted by the contract of April 12, 1905, the United States agreed to pay one-half a cent per pound. As was said by the Court of Claims in the first suit (39 Ct. Cls. 602):

> "The guidance in the world ever better known, or was more completely bound to know, what he was buying than were the defendants when they entered into the contract of April 12, 1905."

III.

The construction placed upon the contract by this Court is not unreasonable.

In the first suit, the United States contended, that the "Harvey Process" of the contract was lim-

lied and defined by the method of applying the process disclosed in one of the Harvey patents (No. 460, 262) dated September 29, 1891, and that as the armor plate there involved was heated to a substantially lower temperature than that prescribed in the patent, the "Harvey Process" was not used.

The Court of Claims overruled this defense and held that the process of the contract was not defined or limited by the patent, and that the United States having received all they bargained for were not

> *"entitled to set up their deviation, if any, from the specifications of the patent as a defense.*
>
> "Moreover, the defendants still hold, under the same contract, the claimant's *obligation to impart to them 'all information concerning any and all improvements which* said party of the first part *may at any time in the future make* in or upon said process,' and 'the *right to adopt and use* and employ *any or all of such improvements in said process*' 'without the payment of any compensation or royalty therefor.'" Italics ours. (39 C. Cls. 300.)

The Court held that the contract was more than a naked license under a patent and entitled the United States

> "to a disclosure of the inventor's process, to his instructions and assistance in the practical application of the patent, and *to use the process, little or much, in whole or in part*" (39 C. Cls., 300).

This court, in its decision of affirmance, after reviewing the experiments made by the Navy Department and the claimant as to the value of the "Harvey Process" before any patent relating thereto was granted, the different contracts entered into between the United States and the

claimant by which the former required a revelation of Harvey's secrets, and obtained the right to use the process and any *improvements* that might be made thereon by the claimant, held that the "Harvey Process" of the contract was the process communicated by the claimant to and actually used by or on behalf of the United States, even though such process varied from that disclosed in the patent.

Mr. Justice HOLMES, said (196 U. S. 317):

> "The argument is that at the time of the contract it was supposed that the heat required for the process was greater than that actually used, that the patent was valid only for a process with the greater heat, and that the contract covers no more than the patent. But the fact that the parties assumed that the process used and intended to be used was covered by the patent, works both ways. It shows they thought and meant that the agreement covered and should cover the process actually used. We think that this can be gathered from the agreement itself apart from the mere supposition of the parties. The contract dealt with a process 'known as the Harvey process.' It imported the speech of the parties and the common speech of the time into the description of the subject matter. The words, Harvey process, commonly are put in quotation marks in the first contract, thus emphasizing the adoption of common speech. They mean the process actually used. The contract states that it is dealing with the same thing that had been the subject of the former agreement. That agreement further identified that subject as a process which was tested at the Naval Ordnance Proving Ground. It also identified it, it is true, as a patented process, but, if the incompatibility of the two marks is more than

> trivial, as it was regarded by the court which found the facts with which we have to deal, the identification by personal familiarity and by common speech is more pungent and immediate than that by reference to a document couched in technical terms, which the very argument for the United States declares not to have been understood. It is like a reference to monuments in a deed. As we have said, this identification by personal experiment and by common speech is carried forward into the contract in suit. *The latter contract manifests on its face that it is dealing with a process actually in use, which requires the communication of practical knowledge and which further experience may improve.*" (Italics ours.)

In concluding the decision, Mr. Justice HOLMES further said:

> "But the fuller the statement should be made the more fully it would appear that the United States was dealing with a matter upon which it had all the knowledge that anyone had, that it was contracting for the use of a process, which, however much it now may be impugned, the United States would not have used when it did but for the communications of the claimant, and that it was contracting for the process which it actually used—a process which has revolutionized the naval armor of the world."

That decision as to the construction to be placed upon the contract is the law of this case. It conclusively holds that the "Harvey Process" of the contract is not limited or defined by, or confined to the method of the patent.

The findings in the present case present no facts which admit of a different construction.

III.

The contention that the patent limits and defines the "Harvey Process" of the contract, cannot be considered on these appeals.

In the present case it was again contended by the appellants that the "Harvey Process" of the contract was limited and defined by claim 1 of the Harvey patent No. 460,262, and that such claim required as an essential element thereof, that sand, or other non-carbonaceous material be packed on the side of the plate which was not to be carbonized. As the Midvale Steel Company had not used sand it was contended by counsel, without any evidence on the point, that it had not therefore used the "Harvey Process" of the patent or of the contract, though, in other respects, the use of the process of both the contract and the patent was admitted or found as a fact (R. p. 39; Finding XV, p. 33).

The Court of Claims, referring to the sole difference in the issue between this suit and the prior one, said (R. pp. 35, 36):

> "In the present case the contention of the defendants and the intervenor is that in the hardening or Harvey process referred to, one of the elements required was the use of sand, a non-carbonaceous material packed in the back of the plates, and that if not so used it can not be contended that the Harvey process was applied by the Midvale Steel Co. in the process which it used in hardening the plates under its several contracts with the United States, though in other respects it concedes

that the Harvey process was substantially used. Its contention is that it did not use sand. That is to say, that it accomplished the same result without, as had been accomplished with sand; and it may be added that the same result was accomplished without the use of any non-carbonaceous material in the back of the plates by confining the carbonaceous material within the brick box, as set forth in the findings.

"The only difference, therefore, between the cases which heretofore went to judgment (one of which was affirmd by the Supreme Court) and the present case is that in the former suits sand was used in the back of the plates, and the question is, Shall this technical change defeat the right of recovery in this case? We say technical, because *the use of sand was not, as a matter of fact, essential* to the Harvey process of carbonizing armor plate." (Italics ours.)

In concluding its opinion, the Court said (R. p 40):

"As was said by the court in this case on the motion for a new trial (39 C. Cls., 297, 299), 'In the opinion of the court the contract entitled the defendants to a disclosure of the inventor's process, to his instructions and assistance in the practical application of the patent, *and to use the process, little or much, in whole or in part;*' and, further, that as the defendants have received all they bargained for, they 'are not entitled to set up their deviations, if any, from the specifications of the patent as a defense.'

"In view of the prior adjudications of the Supreme Court and of this court upon which we rest the right of recovery, as hereinbefore stated, we deem it unnecessary to pursue the case further, nor do we deem it ncessary to review and discuss the authorities cited by

counsel respecting the use and infringement of other patents, as the present case must stand or fall on the prior decisions of this and the Supreme Court, as we have said."

As the record here and the findings of the court below present no new facts relating to the construction of the patent and its alleged limitation upon the Harvey Process of the contract, these questions, having been already determined by this Court, are not open to reargument upon these appeals.

Moreover, the particular Harvey patent in question, and any evidence in the form of testimony and patents or publication relating to the prior art, necessary to a proper construction of the patent, are absent from the record and not before the Court. It is, therefore, respectfully submitted that the contentions of the appellants above referred to cannot be considered here on these appeals.

IV.

The question whether the "Harvey Process" was used is one of fact and is not reviewable.

The question whether the process used by the Midvale Steel Company was the process of the Harvey patent, like the ordinary question of infringement, is a question of fact which on appeal from the Court of Claims is not open to review by this court.

The same is true of the question as to whether the process used by the Midvale Steel Company was

the process of the contract of April 12, 1893, viz.; the process and improvements thereon communicated by the claimant to and used in making armor plates for the United States.

Upon the evidence, the Court of Claims found as a fact that the process used by the Midvale Steel Company was substantially the "Harvey Process" of the contract (Findings III, R. pp. 26, 27; XV, pp. 33, 34 and "Conclusions of Fact," R. p. 35).

It appears from these findings that it was useful to protect the part of the plate which was not to be carbonized (*i. e.*, the back), from the carbonaceous material and at the beginning, it was supposed to be useful to protect the back from the excessive heat. The protection used was sand. This protection, however, was soon found not to be essential to the process and the carbonaceous material was placed within a compartment or a frame of angles between the plates. The use of the sand was gradually discontinued as precisely the same result was accomplished without it, and some of the companies who manufactured the plates were so advised by the claimant late in the year 1893, the year of the contract in suit. Ten years later, when the Midvale Steel Company entered the armor-making field, it too dispensed with the sand (as did the Bethlehem and Carnegie Companies) and placed the carbonaceous material within a brick box compartment between the plates "thus accomplishing," as was found by the Court of Claims, "the same result as with the sand which was used to protect the back of the plate from the carbonaceous material and excessive heat." (R., pp. 27, 29.)

It is thus apparent that the fact essential to

judgment and the only debateable issue in this suit was whether the Midvale Steel Company used the "Harvey Process" of the contract. The Court found that it had.

The Court further quoted claim 1 of the Harvey patent in its third finding of fact. It found as a fact that the Midvale Company used the steps of the method of the patent, with the exception of the sand. (Findings XV, R., pp. 33, 34.) As part of its ultimate conclusion of fact it also found that the Midvale Company in the manufacture of armor plate (designated as Classes A and B) used substantially the "Harvey Process" as defined in the patent. (R., p. 35.) These latter findings of fact in respect to the patent, while greatly strengthening the case for the Harvey Company, and conclusively answering the contentions of the appellants, were not essential to the judgment in favor of the appellee in view of the prior decision of this Court. The appellee was entitled to recover in this case, under the law as laid down in the first suit, even if the process used varied or departed from that of the patent.

Briefly the Court of Claims found as facts fully established by the evidence that the sand was not essential to the "Harvey Process" of the contract, that the United States had been so notified, that the Midvale Steel Company used the "Harvey Process" of the contract and accomplished the same result by the equivalent brick-box arrangement holding the carbonaceous material between the plates, thus protecting the back of the plate, and that the non-use of the sand was only a technical variation.

In its opinion the Court of Claims said (R. pp. 39, 40):

> "That the same result was accomplished without sand by the Midvale Steel Co. is established in this case. Shall this technical variation defeat a recovery? We think not. * * *
>
> "We can not consent that the abandonment of sand—which, as a matter of fact, is not material in the process of carbonizing the armor plate—entitled the Midvale Steel Co. to the rights of the claimant as against the Government in the royalties, or any part thereof, when by express contract the Government had agreed to pay the claimant company for the use of the process on all of its vessels by whomsoever manufactured, and by the terms of its contract had informed the Government of its method and process, and afterwards advised the Government, through the manufacturers of such armor plate, that sand might be discontinued, which was presumably known to the Midvale Steel Co."

The Court of Claims did not consider the absence of the sand as any more of a variation than the difference of heat in the process used by both the Carnegie and Bethlehem Companies had been held in the former suit.

The evidence on which the findings of fact are based is not before this Court. Therefore, as the Court has repeatedly held, these findings of fact are conclusive.

V.

The other questions are frivolous.

The question of whether or not the Midvale Steel Company used the "Harvey Process" of the contract, and the relation of the method of the patent to that of the process of the contract, having been conclusively determined by the findings of the Court of Claims and by the prior decision of this Court, the only remaining questions upon which these appeals can possibly be based must be either frivolous or such as do not require much, if any, further argument.

The other questions urged by the Government in the court below are:

(1) That even if the "Harvey Process" of the contract was used by the Midvale Steel Company, the United States in order to be liable under its contract of April 12, 1893, with the appellee, must have required in words in its contracts with the Midvale Steel Company that the "Harvey Process" be used; that if the United States contracted for and used armor plate which was treated by the "Harvey Process" but which it did not in its contracts with Midvale *require* to be treated by such process, it became an infringer; and

(2) That as the Harvey Steel Company could not sue the United States as an infringer, because of the agreement of April 12, 1893, appellee's only remedy is an infringement suit against the Midvale Steel Company.

In connection with these extraordinary contentions the Court's attention is called to certain facts

found by the court below and to some of the terms of the Midvale contracts. Under the terms of two of these contracts Midvale was given permission by the United States to use the "Harvey Process" if it so desired. The other contracts simply provide that the process used must be satisfactory to the Navy Department. Under all of the contracts the United States had the right to inspect the process used. (Findings IV, V, VII, VIII, X, XI, XIII; R. pp. 27-32.)

As appears from the 14th finding, all of the contracts also provide that the Midvale Steel Company shall save the United States harmless from every demand on account of the use of any patented invention or process which may be used by the Midvale Steel Company in the manufacture of armor, and to protect and discharge the United States from all liability on account thereof. (R. p. 33.)

In passing upon and overruling the contentions of the appellants now under consideration, the Court of Claims, in addition to what has already been quoted from its opinion, said (R., p. 39):

> "Of course the defense of infringement or tort is not available to the United States, since by express contract it had the right to the use of the process on any of its vessels, by whosoever manufactured; and even if we were to assume that the use of the process by the Midvale Steel Co. under any of its contracts with the Government was an infringement it would not avail the Government, since it received the benefit of the process on the vessel so manufactured, and under its contract of license is liable to the claimant company therefor, and that, too, with a right of action over against

> the Midvale Steel Co. for reimbursement. The Government having received the benefit of the process on its vessels under its license cannot compel the claimant company to look to the Midvale Steel Co. for payment or other redress."

The United States did not agree to pay the royalty *only* when it *required* the *Harvey* Process to be used, and only when it used the plates so produced; nor can such terms or conditions be read into the contract of April 12, 1893, by implication or otherwise.

Under the contract, if the United States used armor plate which had been treated by the Harvey Process, whether it *required* the use of such process or not, it became liable at once for the royalty, because it had agreed to pay it.

The license-contract on which the claim is based provides (R. p. 9) that the United States shall have the right to use and employ

> "the aforesaid 'Harvey Process' in the treatment of armor plates for vessels which have been since July 18, 1892, or which may hereafter be authorized by Congress, and to use and employ armor plates for such vessels manufactured according to such process, paying therefor to the party of the first part the royalty of one-half of one cent per pound of the finished plate."

The plain meaning of this language is that the Government will pay the royalty for the use of armor plates manfuactured

> "according to such process" (*i. e.*, the "Harvey process").

It makes no difference whether the Government manufactures the plates itself and puts them on the vessels, or has somebody else manufacture them, or whether the plates come to the Government on the finished ship, or whether they go first to the shipbuilding yard, on the order of the Government, to be put on the ship.

It is absurd to urge that one may secure a right to use a certain process upon payment of a royalty, and after some one else, or its agent, uses the process for and on its behalf, then claim that it is not liable for the royalties, simply because it did not *require* that agent to use the process. There is absolutely no precedent or authority for any such contention.

Moreover, the United States could not become an infringer, because it was a licensee under a contract which had not been cancelled by the licensor or repudiated by the licensee. No suit for the unlicensed use of the "Harvey Process" could possibly lie against the Midvale Steel Company, because that company had a complete defense to such suit, viz.: that it was making the armor for the United States, which had an existing license to use and employ the "Harvey Process" and the armor produced thereby.

It is respectfully submitted that these contentions of the Government are devoid of any substantial foundation or merit, if not actually frivolous.

The granting of the motion to affirm will finally dispose of this controversy.

If, however, the Court should deem further argument necessary, it is respectfully requested that the cause be put upon the summary docket, as it is believed that one-half hour to each side would in view of the controlling decision of this Court in *Harvey Steel Co. vs. U. S.*, 196 U. S. 310, be ample time within which to fully argue the questions involved.

It is, however, respectfully submitted that the motion to affirm should be granted.

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